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News

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INSIDE DOPE

by GEORGE F. TAUBENECK

Wanna Buy a Book?

Our Partner in the Pacific
Time Out for Snide Relaxation
Incentive Taxation Principles
Pres. Wilson Had Faith in Free
American Enterprise System

Wanna Buy a Book?

When scientists who worked on the atomic bomb tell us that the peoples of this world must get together fast, they aren't kidding. Otherwise, ours may be the last generation to reach maturity.

Before we can "get together" however, we must learn more about one another. Because "foreign" folk don't live and act like we do, we tend to be suspicious and distrustful of their motives.

If all of us would just spend an hour or two a week trying to find out what makes other people "tick," we might advance the cause of international peace immeasurably.

These remarks, we hope, will interest you in a new book, "Let's Go to Australia," which has been published by Conjure House "as a contribution to One World understanding." The price is \$2.75 postpaid, and you can order it direct from us. (Special offer to Australians: We'll pay the postage on your orders, too.)

Why do we bring this up? Well, the author is your obedient servant, the conductor of "Inside Dope," known formally as George F. Taubeneck.

Subscribers to the NEWS, who order "Let's Go to Australia" may have their copies autographed if they wish.

Our Partner in the Pacific

Not much has been published about Australia. Yet this wonderful land of freemen, located on the opposite side of the globe, yearns for a closer liaison with America. Working together, the lusty, growingly powerful, brotherly-loving nations of Australia, Canada, and the United States could guarantee Peace in the Pacific. We form the opposite ends of a natural Pacific axis. So, it's high time we were better acquainted.

Australians are probably the Grandest People on Earth. Their salubrious living standards, their country's marvelous climate, and their advanced national policies all combine to make Life most rewarding in the Down-Under Land. It's one spot on earth, in this day and age, where the leading occupation is the Pursuit of Happiness.

Written for interested Americans, this volume attempts to tell all the things which are different about Australia—including the oddments which make Australia so extraordinary—and to relate the information which anyone might need who could export his products (some day when he has products) into this rich market.

Shortly before publication, the manuscript was edited, annotated, and enlarged by the Australian Bureau of Information, the Australian Embassy in Washington, D. C., and several well-informed native Australians. It is up-to-date and authentic.

And if any of your G.I. sons, relatives, or employees spent time in the South Pacific, they'll appreciate receiving this book as a gift.

Wanna buy a book?

Time Out for
Snide Relaxation

Our nation's best-qualified journalists agree that the strictly disciplined Communists within our midst are striving to make America a mess, a shambles—possibly to help

(Concluded on Page 4, Column 1)

Westinghouse Sees
Considerable Delay
For Big Appliances

MANSFIELD, Ohio—While manufacture of small appliances is getting underway immediately, following opening of the Westinghouse Electric Corp. plants following the 119-day strike shutdown, there will be considerable delay in the resumption of production of refrigerators and other major appliances, reports J. H. Ashbaugh, vice president in charge of the Appliance Division.

"Some of the equipment for production of major appliances must be overhauled," said Mr. Ashbaugh. "We cannot at this time say when such items as refrigerators, automatic washers, and ranges will be in production."

In a mid-week statement, Gwilym A. Price, Westinghouse president, said the wage raise agreed upon represents an average increase per employee of 16.4 cents an hour. At the time the strike was settled it was announced that a pay increase of 13 cents an hour was part of the terms but that this figure would be subject to variations for the individual worker.

\$550 Retail Ceiling
Set for Frostair Box

CHICAGO—Two-zone ceiling prices for the Frostair "dual-purpose" household refrigerator—originally called the Frostor—were recently announced by OPA in Order 453, MPR 591.

OPA authorized retail maximum prices of \$550 in Zone 1 and \$555 in Zone 2. Ceilings on sales to distributors and to three classes of dealers also were approved.

The combination unit, which is comprised of a 7-cu. ft. refrigerator and a separate 3.5-cu. ft. frozen food locker, is marketed by the Frostair Division of General Tire & Rubber Co. It is manufactured by Liquid Carbonic Corp. here.

General Tire and Liquid Carbonic late last year jointly announced that the refrigerator would be produced under the Frostor label. The trade name was just recently changed.

Maximum prices were set as follows, effective April 30:

	Zone 1	Zone 2
Model TT-A Frostair:		
On sales to distributors	\$307	\$312
On sales to "A" dealers	346	351
On sales to "B" dealers	357	362
On sales to "C" dealers	368	373
On sales to consumers	550	555

OPA said the ceilings are subject to discounts and allowances similar to those in effect on Oct. 1, 1941, on comparable sales. The usual crating and freight charges may be added.

Army Studies Use of
Frozen Foods in Combat

WASHINGTON, D. C.—A new distribution plan for feeding troops in combat areas dependent upon the general use of frozen and refrigerated foods has been evolved by a staff conference taking place in Washington during most of April.

New ration items, revised plans of packing and shipping foods, and redesigned field refrigerators, are part of the whole plan. The authors include a number of engineers experienced in army refrigeration problems, headed by Lt. Col. Allan N. Johansen, as chairman of a special committee on refrigeration, one of the four main groups composing the conference.

This meeting was called by Quartermaster General T. B. Larkin at the request of the chief of the Army Ground Forces, General Devers, to

(Concluded on Page 21, Column 2)

Over 100 Firms
Already Signed
For Show Space

PITTSBURGH—More than 100 companies active in the refrigeration, air conditioning, and frozen food locker fields already have contracted for space in the first complete post-war showing of the newest products developed in these fields—the All-Industry Refrigeration & Air Conditioning Exposition to be held Oct. 29 to Nov. 1 in the Cleveland Public Auditorium.

This was announced last week by K. B. Thorndike, vice president of Detroit Lubricator Co. and chairman of the committee directing the show for the Refrigeration Equipment Manufacturers Association and the Frozen Food Locker Manufacturers and Suppliers Association which is cooperating in the sponsorship of the exposition.

Mr. Thorndike emphasized that the show is open to all manufacturers having an interest in the various industries named, without regard to their affiliation with any association. There are a number of choice exhibit spaces still available, Mr. Thorndike stated, and information concerning them may be obtained from the Refrigeration Equipment Manufacturers Association headquarters, 1107 Clark Bldg., Pittsburgh.

The show will occupy four exhibition halls with a total of 75,000 sq. ft. in the Cleveland Auditorium. It will be the first such general exhibition held by the industry since 1941.

The list of exhibitors as of May 1—six months before the opening—reveals manufacturers covering all branches of the industry including complete units, refrigerating machines, parts and supplies, air conditioning units, locker plant and frozen food equipment and accessories, and many products and materials associated with these fields.

Following is the list of firms who have contracted for space:

Acme Industries, Inc., Alco Valve Co., All-American Meat & Bone Cutter Co., All-Steel-Equip Co., Amana Society, American Coils Co., American Injector Co., Ansul Chemical Co., Automatic Products Co., Baker Ice Machine Co., Inc., The Biro Mfg. Co., Bonney Forge & Tool Works, Earl E. Brown Organization, Brunner Mfg. Co.

Bundy Tubing Co., Bush Mfg. Co., Business News Publishing Co., D. R. Card Co., Carrier Corp., Chicago Seal Co., Container Corp. of America, Coolstream Corp., Copeland Refrigeration Corp., Cordley & Hayes, The Cornelius Co., Curtis Refrigerating Co., Cutler-Hammer, Inc., The Davison Chemical Corp., Day & Night Mfg. Co., The Dayton Rubber Mfg. Co.

Detroit Lubricator Co., Dole Refrigerating Co., E. I. duPont de Nemours & Co., The Ebco Mfg. Co., Electric Power Equipment Corp.,

(Concluded on Page 21, Column 1)

April Copper Output
Drops to New Low

NEW YORK CITY—A drop in refined copper production for April resulted in a monthly output figure of 18,989 tons, said to be the lowest for any month in years, the Copper Institute has reported. This figure compares with 20,139 tons turned out in March.

Stocks of refined copper at refineries produced from U. S. ores showed a commensurate decrease during the past month of 4,801 tons, bringing the present reserve to 65,448, the report stated. Domestic deliveries were set at 75,756 tons, 51,966 of which had been processed from foreign ores. In March the volume of domestic deliveries was 58,590 tons.

Ceilings on Motors
Increased 16.5%

WASHINGTON, D. C.—Manufacturers of electric motors have been granted a 16.5% increase in their ceiling prices by the Office of Price Administration. The boost is effective as of May 13, and applies to both integral and fractional horsepower motors.

Producers of fractional horsepower motors were granted a 9% increase in ceilings last August, and the new increase represents an additional boost.

The 16.5% increase was also granted to manufacturers of internal combustion engines, and both engine and motor producers were granted the price boost to compensate for increases in labor and material costs, OPA said.

A.S.H.V.E. Completes
Program for Meeting

MONTREAL—Complete program for the semi-annual meeting of the American Society of Heating and Ventilating Engineers, most of which will be held aboard ship while cruising the St. Lawrence river, has been announced.

Ten technical papers will be presented during the meeting, starting June 10 at the Mount Royal hotel here. In addition to business sessions, the convention will include sight-seeing trips, swimming, golf, and tennis, plus deckgames on the S. S. Quebec.

Registration opens Monday, June 10, at the hotel, followed by a welcome luncheon and a research session. At 5:30 p.m. Monday the society will board the cruise ship, which will pull out for Quebec, according to F. A. Hamlet, chairman of the committee on arrangements. The Montreal A.S.H.V.E. chapter will serve as hosts for the meeting.

There will be entertainment and dancing aboard ship Monday night, and Tuesday morning a technical session on air conditioning will be held in the ship's music room. Tuesday afternoon and evening will be devoted to sight-seeing and sports. The third technical session is scheduled for Wednesday morning and will likewise be held on board.

(Concluded on Page 24, Column 2)

Cooling for Custards
Mandatory Under
St. Louis Ruling

ST. LOUIS—All bakeries, restaurants, and luncheonettes here, must prove that they have "certified" refrigeration equipment to maintain temperatures of 50° F. or less before they will be allowed to sell whipped cream or custard products during the summer, according to a recent regulation imposed by the St. Louis City Health Department.

A warning against the sale of chocolate eclairs, cream puffs, and custard or cream cakes and pies during the summer hot season was issued to all food associations in the city by the Department on May 4. The edict pointed out that all such items have a tendency to spoil quickly during hot weather, and that there were numerous cases of food poisoning in the past which were traced to lack of refrigeration of such items.

The Health Department further ordered that manufacture and sale of products containing whipped cream or custard will be discontinued during the period from June 1 to Oct. 1—unless these products are kept under certified refrigeration of 50° F. or less from the time of manufacture to sale.

Prices Up 17%
on Compressors,
Units to 5 Hp.Resellers Are Permitted
To Pass Along Increase
In Dollars-&-Cents

WASHINGTON, D. C.—A 17% increase in manufacturers' prices for refrigeration compressors and condensing units through 5-hp. capacity was authorized May 9, by OPA.

Repair and service parts for such equipment are given a similar price increase.

(Text of the order appears on back page.)

Resellers of condensing units may pass on the actual dollar-and-cents amounts of the increase in their acquisition costs brought about by the increase in manufacturers' prices, the order stated.

However, the term "reseller" does not include anyone who purchases such equipment for incorporation into or assembly into another product (such as a refrigerator), with which it is customarily sold as a single unit at a single price.

Where a manufacturer has been given previous "percentage" price increases on his base price, it is understood that present increase shall only bring it to 17%.

The OPA Compressor and Condensing Unit Industry Advisory Committee which did the big job of collecting the figures and data on which OPA based its opinion for an increase, will not disband. It will remain active to handle any future problems on pricing that may arise, declared Sterling Smith of Baker Ice Machine Co., chairman.

In an opinion accompanying Amendment 11 to Order 1 under MPR 591 (which authorized the increase) the OPA said that consideration had been given to the possibility of requiring partial or complete absorption of the manufacturers' increase by distributors. However, said the opinion—

"It is known that distributors operate at a mark-up of 25% on cost. It is further known that this class of reseller has an average operating expense rate of 20% on cost.

"Under these circumstances, distributors cannot be required to absorb all of the manufacturers increase since the resulting margin would be less than their average expense rate. However, the distributor would retain a margin just equal to his average expense rate if he were permitted to reflect in his maximum prices the actual increase in acquisition cost resulting from the manufacturer's price advance. Thus a provision is made for a dollar-and-cents pass through by distributors.

"Sales by retailers of compressors and condensing units are almost without exception on an installed basis. Such sales are subject to service regulations which permit the use of current material costs in price computations. Absorption by such sellers is therefore not possible."

Refrigerator Can Help
In Food Crisis

LINCOLN, Neb.—The use of the refrigerators in homes and public food establishments as a means of saving wheat in the current voluntary food conservation, was suggested by R. G. Smith, official of the Smith Baking Co. of Lincoln, at the first meeting of the Nebraska Food Conservation Committee. Mr. Smith, who is a member of the committee, declared that bread can be kept fresher longer if it is kept in a refrigerator, thus eliminating waste by spoilage.

Davidson, Serner Form Special Equipment Firm

NEW YORK CITY—W. H. Davidson and H. E. Serner have organized a new firm for the sale of special equipment in process engineering, with particular emphasis on special heat exchange processes and steam jet refrigeration, including oil and diphenal heating and special furnace design.

Offices of the firm of Davidson & Serner are in the Commercial Trust Bldg., Philadelphia, and at 342 Madison Ave. here, it was announced.

Mr. Davidson previously was engaged in the sale and construction of power plant and industrial equipment. He represents the Lummus Co. and the Green Fuel Economizer Co., Inc., in eastern Pennsylvania.

Formerly director of engineering for the H. K. Porter Co., Mr. Serner also was connected with the Alco Products division of the American Locomotive Co., with E. B. Badger & Sons, Inc., and with the division of the Union Carbide & Carbon Corp.

Bond Equipment Set Up As Commercial Outlet

COLUMBIA, S. C.—A new commercial refrigeration dealership here recently established is the Bond Equipment Co., which will specialize in walk-in and reach-in refrigerator equipment for restaurants.

The company began business with a \$40,000 paid-in capital. Officers are John M. Bond, president and treasurer, and Dorothy S. Bond, vice president and secretary.

Wichita Concern Joins Parts Wholesalers

CINCINNATI—The Refrigeration Equipment Co., Inc., Wichita, Kan., has been unanimously elected to membership in the Refrigeration Equipment Wholesalers Association, it is reported by H. S. McCloud, executive secretary of REWA. This firm was approved for membership by the officers of Region No. 7 before the matter was submitted to the REWA board of directors.

E. L. Tramposh is president of the new REWA firm, and John Lear, vice president and manager, will be REWA representative, Mr. McCloud said.

12 More Distributors Named by Iceberg

NEW YORK CITY—Iceberg Refrigerated Locker Systems, Inc. has announced the appointment of 12 more distributors for its line of frozen food storage units. Included are:

Morrison Sales Co., Birmingham, Ala.; Mutual Appliance Distributors, Buffalo; Cumberland Sales Co., Inc., Nashville, Tenn.; Refrigeration & Equipment Co., Erie, Pa.; Ewald Distributing Co., Louisville, Ky.; D. W. May Corp., New York City; Advanced Refrigeration & Appliance Corp., Pittsburgh; Goddard-Hottel Corp., Washington, D. C.; H. D. Smith, Bluefield, W. Va.; Johnson Furniture Co., Mitchell, S. D.; D'Elia Electric Co., Inc., Bridgeport, Conn.; G. B. Covits & Co., Inc., Wichita, Kan.

OPA Fines Dealer \$40 for Ignoring Price Ceiling

OMAHA, Neb.—A charge of selling a used mechanical refrigerator at over-ceiling price resulted in an Omahan being fined \$25 plus \$15 attorney fees, in an OPA action. Municipal Judge Frank Nimtz awarded the judgment after George F. Englebrechtsen said he was charged \$25 for a 1931 refrigerator with a ceiling of \$19.50. The buyer contended that after encountering mechanical difficulties with the machine, he found he had paid over the ceiling. The OPA then intervened in the case.

Seibel Returns as Lynch Defiance Works Manager

DEFIANCE, Ohio — Richard R. Seibel, a former army lieutenant colonel, has resumed his position as works manager of the Defiance plant of Lynch Mfg. Corp. of Toledo after serving four and a half years in the armed services.

Mr. Seibel joined Lynch in 1939 and entered the armed services in June, 1941. He served as executive officer of Combat Command "B" in the 11th Armored Division. While in Austria, he became camp commander of Mauthausen concentration camp which contained 18,000 liberated prisoners representing 21 nations.

He returned to the U. S. in October, 1945, and rejoined Lynch upon his release from service.

Pharmacist Stresses Use of Refrigeration



Gilbert Spieldoch, who heads a drug store in St. Louis, checks over biologicals stored in his new specially built commercial reach-ins.

Custom-Built Reach-ins Help Druggist Preserve and Promote Biologicals

ST. LOUIS—Doing a large-scale prescription business in serums, vaccines, and biological drugs, which must be kept under unvarying refrigeration at all times, University Drug Co. here has installed two large reach-in refrigerators especially built for the job by Servel.

Gilbert Spieldoch, head of the store, which is one of the largest strictly-prescription drugstores in the midwest, emphasizes the extreme importance of most of the biological drugs concerned. "These must be at peak efficiency at all times because they are invariably needed in an emergency," he pointed out, "therefore, we make a point of demonstrating to all doctors writing prescriptions on our store how the refrigeration equipment is arranged, its control system, and other features, to make certain that they remember us in connection with the diseases concerned."

The two refrigerators, both 7 x 7 ft. by 20 in. deep, are installed at right angles to the prescription counter, recessed into the wall separating two sections of the store. Each is

equipped with double plate glass doors, and is enameled pure white with chromium hardware.

The drugs and biologicals are stocked in 56 galvanized metal drawers, 6 in. deep, 10 in. long, and 18 in. wide. These are arranged in tiers with outer faces enameled white with cards identifying their contents slipped into metal brackets on the face.

All boxes, bottles, capsules, etc., concerned are spaced to allow plenty of circulation of cooled air to maintain a temperature of 44° F. the year around, best for most such biologicals and vaccines.

Mr. Spieldoch spent \$2,500 for this large-scale drug refrigeration, which was installed and designed by Servel, Evansville, Ind., through its specialty engineering department.

Both of the refrigerators are powered by a 1½-hp. gas refrigeration unit in the basement, connected with the box through especially protected lines which cannot be damaged by fire or careless handling of heavy crates. A warning device is built in to show any sudden change in refrigerator temperature.

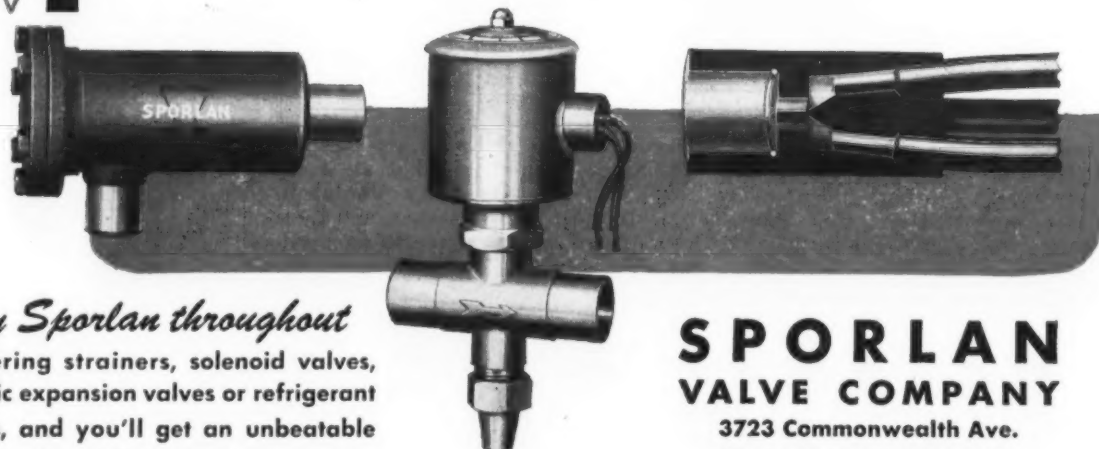
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Only Sporlan offers you thermostatic expansion valves with selective charges... each to do a specific job. So don't just ask your wholesaler for a valve... ask him for a Sporlan valve, selectively charged to give you peak performance on any size installation.

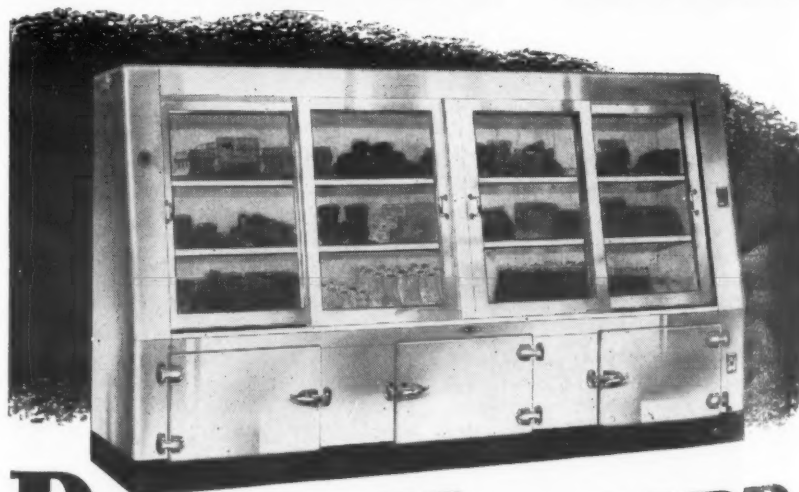


Specify Sporlan throughout
when ordering strainers, solenoid valves, thermostatic expansion valves or refrigerant distributors, and you'll get an unbeatable combination of perfect performers!

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PUFFER-HUBBARD
GRAND HAVEN MICHIGAN

SELF
SERVE **DAIRY CASE**



PUFFER-HUBBARD
ANOTHER CASE OF
Good Refrigeration Engineering

Practically every type of commercial refrigeration cabinet including Refrigerated Dairy and Vegetable Cases — Beverage Coolers — Walk-in Coolers — and Grad-U-Matic equipped Reach-in Cabinets... each bearing the mark of a good case.

All porcelain exteriors and interiors. Equipped with patented and exclusive features.

PUFFER-HUBBARD MFG. CO.

★ *The Mark of a Good Case*
GRAND HAVEN, MICHIGAN, EST. 1898

SET IT—  AND FORGET IT...

THE NEW BUY-WORD IN ELECTRIC RANGES

Here's evidence anew of the retail-minded thinking that has made the Kelvinator Franchise so valuable an asset to dealers.

It's the sensational new Kelvinator "Automatic Cook" Electric Range and pictured here is national advertising that tells the news in full color pages

appearing in a long list of America's giant circulation magazines.

Here, in one gleaming package, is a post-war promise fulfilled for Mrs. America, and for Kelvinator dealers. For in this superb electric range, which cooks whole meals *all by itself*—Kelvinator has en-

gineered into reality the fondest dreams of millions of home-makers.

With this new range line, Kelvinator further rounds out both the product and policy phases of the Kelvinator Franchise—creating new avenues of sales for every franchise holder. Another reason why the Kelvinator Franchise is . . .

*The most Valuable Franchise
in the Appliance Industry*

LOOK AHEAD WITH

RETAIL-MINDED

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Wednesday Nights, 10:30 Eastern Daylight Saving Time. Nash-Kelvinator's New Musical Hit—David Rose and his Orchestra, with Curt Massey, Kitty Kallen, CBS, All Stations.



INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)
Russia step ahead in the reconversion and rearmament race.

They can only speculate, in their simple democratic fashion, on what American Free Enterprise could do with a super-endowed nation like Russia!

Inasmuch as Russian diplomats are famed for their blunt, direct speech, we wonder why they haven't announced publicly that their re-

quested billion-dollar loan is earmarked for atom-bomb development!

Incentive Taxation Principles

Favoring a federal tax program which would lend support to new enterprises, plus an elimination of tax exemption on state and municipal securities, Economist Richard A. Musgrave has done the nation a service by disclosing his views on taxation's effects upon business expansion in the Federal Reserve Board's symposium of postwar economic studies, entitled "Public Finance and Full Employment."

Implying that the United States

is due for a deflationary period when the present buying spree subsides, Mr. Musgrave warns against allowing federal tax policies to hinder the investment of capital in new, job-giving businesses.

A capitalist who is in the 65% surtax bracket can secure from 4% tax-exempt bonds as much income for himself as he would get from a risky venture which might yield 15% to its owners, "quite apart from avoiding the risks of the higher-yield securities," he points out.

Consequently, the very presence of tax-exempt bond income discourages investment in new private enterprise situations.

Predicting a serious dilemma for tax legislation formulators during deflation periods, Mr. Musgrave insists that investment is most apt to be deterred by taxes which least depress consumption.

A study of investment programs pursued by various income groups is recommended in his well documented attempt to iron out this alarming situation.

Pres. Wilson Had Faith in Free American Enterprise

"So far as our domestic affairs are concerned the problem of our return to peace is a problem of economic and industrial readjustment.

"Our people do not wait to be coached and led. They know their own business, are quick and resourceful at every readjustment, definite in purpose and self-reliant in action.

"Any leading strings we might seek to put them in would become hopelessly tangled because they would pay no attention to them and go their own way.

"All that we can do as their legislative and executive servants is to mediate the process of change here, there, and elsewhere as we may.

"I have heard much counsel as to the plans that should be forced and personally conducted to a happy consummation, but from no quarter have I seen any general scheme of 'reconstruction' emerge which I thought it likely we could force our spirited businessmen and self-reliant laborers to accept with due pliancy and obedience.

"While the war lasted we set up many agencies by which to direct the industries of the country in the services it was necessary for them to render. But the moment we knew the Armistice had been signed, we took the harness off.

"Raw materials, on which the government had kept its hand for fear there should not be enough for the industries that supplied the armies, have been released and put on the general market again.

"Never before have there been agencies in existence in this country which knew so much of the field of supply, of labor, and of industry, as the War Industries Board, the War Trade Board, the Labor Department, the Food Administration, and the Fuel Administration have known.

"It has been the policy of the Executive, therefore, since the Armistice was assured to put the knowledge of these bodies at the disposal of the businessmen of the country and to offer them intelligent mediation at every point and in every matter where it was desired.

"It is surprising how fast the process of a return to a peace footing has moved in these weeks since the fighting stopped.

"It promises to outrun any inquiry that may be instituted and any aid that may be offered.

"It will not be easy to direct it any better than it will direct itself."—Excerpt from message to Congress by Woodrow Wilson, December 2nd, 1918.



V. C. KNIGHT
* * *

Knight Named Vice Pres. Of McCray Refrigerator Co.

KENDALLVILLE, Ind. — V. C. Knight, factory manager and chief engineer of McCray Refrigerator Co., manufacturer of commercial refrigerators, has been elevated to the position of vice president in charge of operations, the company said.

Mr. Knight will be responsible for factory and engineering operations.



"Never mind the etchings—Let me see your BUSH COOLER!"



THE NEW TYLER FROZEN FOODS DISPLAY CASE is a good example of how Tyler keeps abreast of the times. It's THE equipment for selling frozen foods—and the market is terrific!

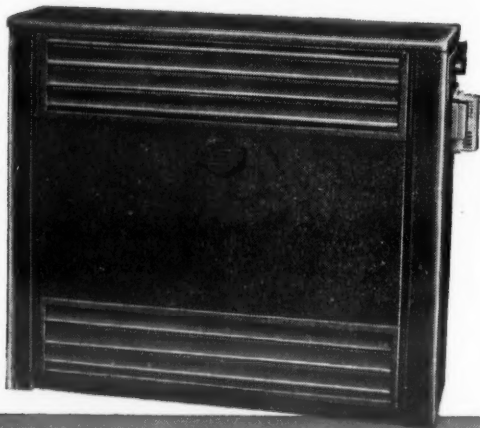
TYLER
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A SIMPLIFIED CHART
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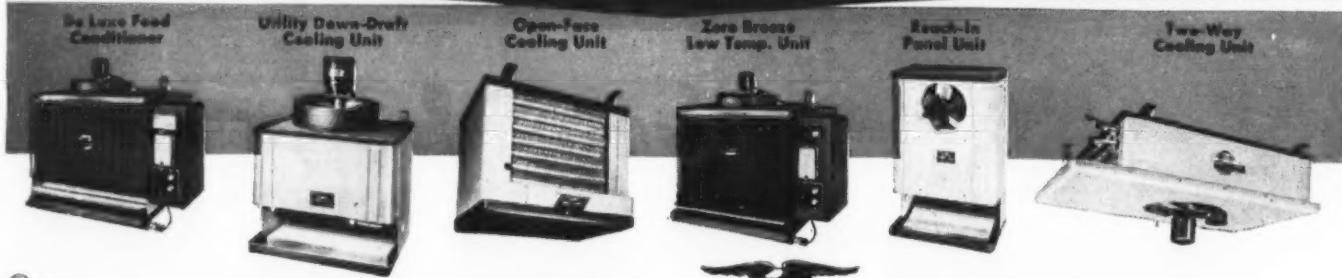
IT'S REVOLUTIONARY

Get this literature! You can't be up-to-date on air-conditioning without it. The AMCOIL COMFORTAIRE CONDITIONER is really new and unique. Operates on a new development of the vapor-pressure principle! Requires only half the usual condensing unit capacity! Has positively demonstrated that it provides comfortable, healthful air conditioning for human comfort without that clammy overcooled feeling. AIR CONDITIONING AT ITS BEST.

NO "ENGINEERING" FOR YOU TO DO!

This new Amcoil development makes your selling job easier. All you have to know is size of the room and maximum number of occupants. The ENGINEERING is done. The Amcoil simplified selection chart gives you the proper size Comfortaire unit

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J. York Feltel, 813 Howard Ave., New Orleans, La.

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Cutler-Hammer Refrigeration Replacement Control

The Cutler-Hammer line of Refrigeration Replacement Control is unusually comprehensive and complete. One unit alone, the Universal unit, will handle 60% of the repairman's needs. In rare cases where exact replacement control must be furnished, that item also will be found in the Cutler-Hammer line, individually packed, clearly labeled, complete with dial plate, mounting screws, trim washers and instructions for mounting, and range and differential adjustments.

The Cutler-Hammer Line of Refrigeration Replacement Controls is the product of more than 50 years of fundamental control specialization... another reason why outstanding refrigeration wholesalers recommend it and alert service organizations from coast to coast feature and use it.



CUTLER-HAMMER, Inc., 1362 St. Paul Ave., Milwaukee 1, Wisconsin. Associate: Canadian Cutler-Hammer, Ltd., Toronto, Ont.

4 degree external differential adjustment either side of normal cutout



DOMESTIC, SEMI-COMMERCIAL AND COMMERCIAL CONTROL

This One Universal unit alone covers 60% of all needs.

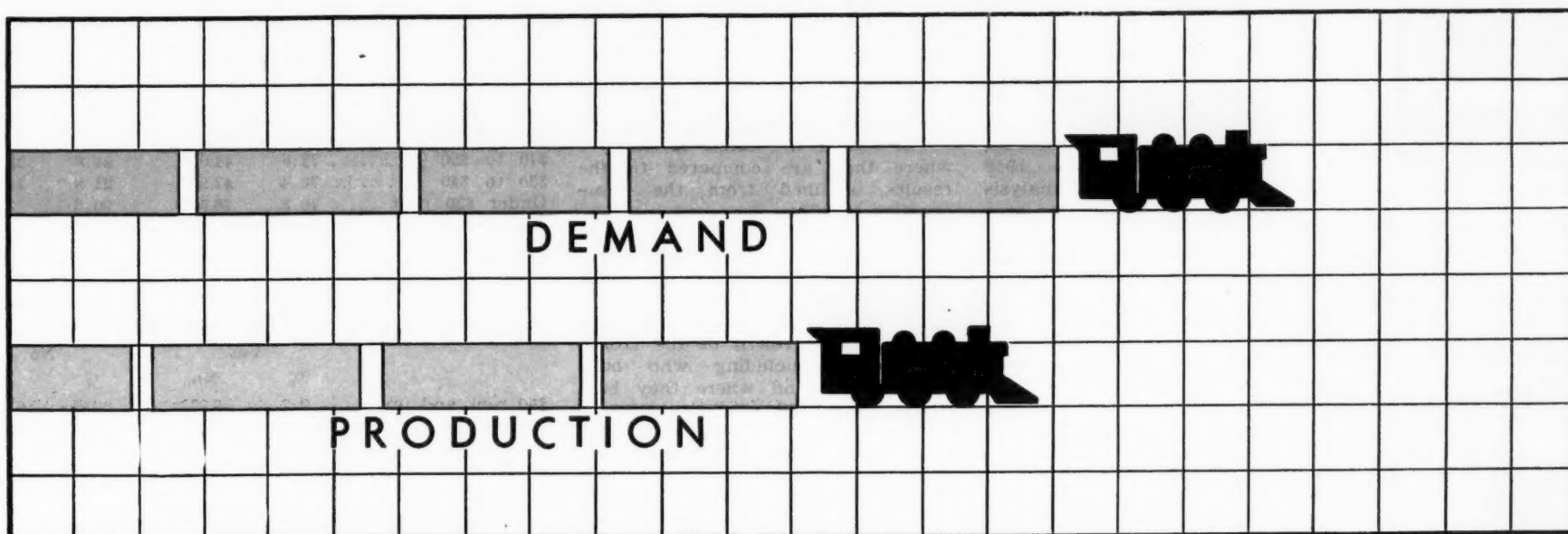
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Adjustable Mounting Brackets
Maximum Mounting Centers... 4-3/16
Minimum Mounting Centers... 2-3/16

Adjustable Cutout Feature—Differential can be increased 4 degrees by turning indicator in "Hi" direction and decreased 4 degrees by turning in "Lo" direction.

Adjustable Range—Turning screw clockwise lowers settings and counter-clockwise raises settings.

Operating knob can be adjusted to meet various evaporator scale settings. New knob is ideal for varying shield thicknesses. Makes this control adaptable to wider range of single dial replacement jobs where overload is not required in unit.



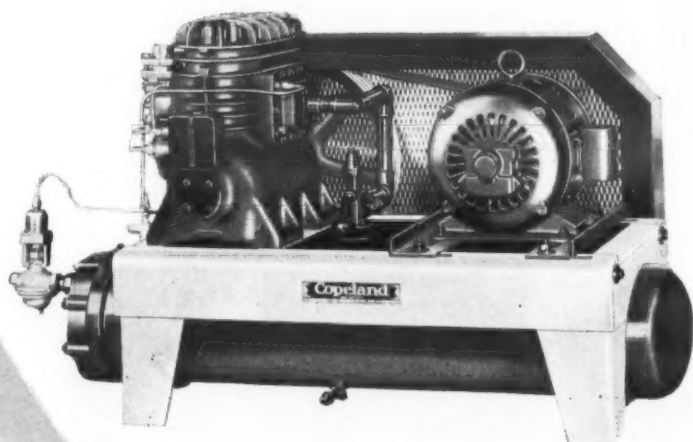
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Compact, belt-driven units for self-contained installation. Sizes from 1/6 H.P. to 1/2 H.P. A model for every range of refrigeration temperature.

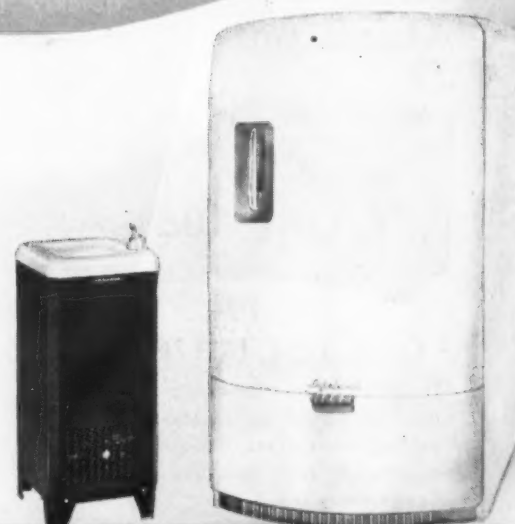


COPELAMETIC, the ACCESSIBLE hermetic! Combines all the advantages of open-type units and welded-in hermetics. Eliminates belts, seals, manual oiling. Models from 1/20 H.P. to full 3/4 H.P.



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Copeland electric water coolers and household refrigerators are smart-looking, low-cost in operation, thoroughly dependable.



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CONDENSING UNITS AND PARTS

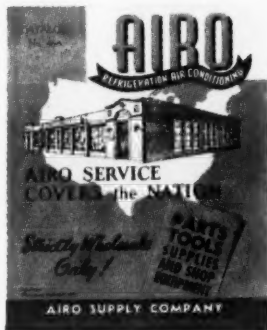
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Our 1946 CATALOG

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'One Out of Four' Milwaukee Citizens See Need For Home Freezer Facilities

Journal's 1946 Survey Reveals New Consumer Wants

MILWAUKEE—Three out of four Milwaukee citizens would choose a small freezer space in a regular mechanical refrigerator over a freezer and storage cabinet separate from the refrigerator, the 1946 Milwaukee Journal consumer analysis of the greater Milwaukee area reveals.

The survey also reported that 7.4% of Milwaukee families plan to buy an electric dishwashing machine when one becomes available.

A total of 44.8% of Milwaukee families said that they purchased packaged quick frozen foods. This represents a more than 50% increase over the number purchasing quick frozen food in 1945.

Frozen dog food was purchased by 12% of dog food buyers, it was reported.

The Milwaukee Journal survey is based on a sampling of 7,000 families, or over 3% of the area's total, and is tabulated according to rental groups. Of the 7,000 questionnaires returned, 31.4% came from the \$50 or over rental group; 26.1% from the \$40 to \$50 group; 27.4% from the \$30 to \$40 group; and 15.1% from the under \$30 rental group. Results are tabulated and projected on the 228,927 families in Greater Milwaukee to give the figures used in the accompanying tables.

For the data on low temperature cabinets for the home, housewives

were asked,

"Which of the following equipment would best meet your requirements for freezing or keeping foods fresh?"

The results are found in Table I where they are compared to the results obtained from the same question in 1944.

Tables II and III record the results of the question, "Do you plan to buy an electric dishwashing machine when available?"

Tables IV and VII tell the story of the rapid growth of the frozen food habit, including who buys frozen foods and where they buy.

With the 1946 analysis, data on ownership of major appliances was repeated from the 1945 survey. No new data was obtained because production and sales had not changed materially. This data included the types of appliances that families would buy if they were replacing their present equipment. They are:

Refrigerators

Electric	82.3%
Gas	16.6%
Ice	1.1%

Cooking Ranges

Gas	61.6%
Electric	38.1%
Coal, coke, wood	3%

Electric Washing Machines

Fully automatic	37.4%
Wringer type	35.0%
Spinner type	14.5%
Don't know	13.1%

Survey on Freezers, Dishwashers, Frozen Foods

TABLE 1—DIVISION OF ALL FAMILIES ACCORDING TO CHOICE OF REFRIGERATION EQUIPMENT

	Small Freezing Unit and Cold Storage Space In a Regular Mechanical Refrigerator		Quick Freezing and Storage Cabinet Separate From a Regular Mechanical Refrigerator		Don't Know	
	%	No.	%	No.	%	No.
\$50 rent and up	68.5	49,240	31.0	22,284	.5	359
\$40 to \$50	73.8	44,096	24.8	14,818	1.4	836
\$30 to \$40	76.4	47,923	21.8	13,674	1.8	1,129
Under \$30 rent	76.8	26,548	20.6	7,121	2.6	899
Totals—1946	73.3	167,807	25.3	57,897	1.4	3,223
Totals—1944	67.7	153,046	31.4	70,985	.9	2,035

TABLE 3—INTENTION TO BUY DISHWASHING MACHINES BY INCOME GROUPS

	Yes		No		Don't Know	
	%	No.	%	No.	%	No.
\$50 rent and up	9.7	6,973	88.8	63,802	1.5	1,108
\$40 to \$50	6.3	3,764	92.7	55,388	1.0	598
\$30 to \$40	7.0	4,391	92.0	57,684	1.0	601
Under \$30 rent	5.3	1,832	93.7	32,392	1.0	344

TABLE 2—DIVISION OF ALL FAMILIES ACCORDING TO WHETHER THEY WILL BUY AN ELECTRIC DISHWASHING MACHINE WHEN AVAILABLE

	Yes		No		Don't know	
	%	No.	%	No.	%	No.
Yes	7.4	16,960				
No	91.4	209,266				
Don't know	1.2	2,701				

TABLE 4—DO YOU BUY FRESH FROSTED (QUICK FROZEN) FOODS IN PACKAGES?

Year	Of All Families	
	%	No.
1946	44.8	102,560
1945	28.3	64,418
1943	21.5	47,014
1942	19.0	39,989

TABLE 5—FROZEN FOOD BUYERS BY INCOME GROUPS

	%	No.
\$50 rent and up	55.5	39,925
\$40 to \$50 rent	44.4	26,544
\$30 to \$40 rent	39.5	24,787
Under \$30 rent	32.7	11,304

TABLE 6 NUMBER OF BRANDS IN USE

Year	No.
1946	33
1945	14
1943	18
1942	18

TABLE 7 PLACE OF PURCHASE OF FRESH FROSTED FOODS

	%	No.
Grocery Store	76.89	78,854
Fruit and Vegetable Store	11.75	12,048
Meat Store	5.46	5,595
Frozen Food Store	3.03	3,110
Dairy Store	2.30	2,356
House to House		
Truck Route	.06	64
Miscellaneous	.51	533

See Employment For 2 Million Veterans In Frozen Food Field

NEW BRUNSWICK, N. J.—Prediction that 2,000,000 veterans will be absorbed by the quick frozen food industry within the next few years was made by C. Courtney Seabrook, an official of Seabrook Farms at Bridgeton, N. J., in his address to the second annual frozen food conference at Rutgers university under the auspices of the Refrigeration Association and the agricultural experiment station of this state.

Emphasizing the importance of New Jersey as a source of frozen foods, Mr. Seabrook pointed out that 50,000 acres of the state's vegetable crops are quick frozen each year.

Development of an electronic blancher to facilitate the preparation of frozen foods at locker plants was suggested to the gathering by F. S. Burroughs of the Newton Food Co. He feels that such a device would eliminate the handicap caused by unsatisfactory blanchers in the past.

He also suggested the possibility of cooking food at the plant, thereby preparing it for the table as well as the range.

Other speakers included George W. Crowther, assistant agricultural engineer at the University of Connecticut, and Dr. Faith Fenton, professor of home economics at Cornell university.

The conference was attended by 300 home economic authorities, farmers, locker plant operators, and others engaged in the preparation of frozen foods.

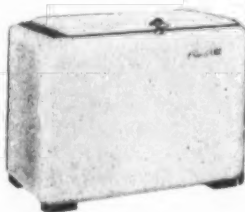
Sure...lots of Home Freezers— BUT ONLY ONE FREEZ-ALL



MODEL 160
16 cu. ft. Drawer Type
FREEZ-ALL Home Freezer.

Actually OPENS AS EASILY AS THE DRAWERS IN A ROLLER BEARING FILE

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For Maximum
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A "cartridge" inside limits suction pressure and keeps the valve closed until the pressure drops below the valve setting. This prevents burned-out motors—often permits use of smaller condensing equipment.

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Text of Order on Housing Which Exempts Conditioners and Commercial Cabinets

Editor's Note: This supplement to Veterans' Emergency Housing Program Order No. 1 tells specifically what fixtures and mechanical equipment are excluded from provisions of the order, as well as what types are included. Self-contained air conditioners not connected to ductwork, for example, do not come under restrictions of the order.

CIVILIAN PRODUCTION ADMINISTRATION PART 4700—VETERANS' EMERGENCY HOUSING PROGRAM [VHP-1, Supp. 1] FIXTURES AND EQUIPMENT

§ 4700.2 (a) **What this supplement does.** Veterans' Housing Program Order 1 restricts construction and alterations of buildings and certain other structures, including alterations incidental to the installation of equipment. It also restricts the installation of fixtures and mechanical equipment, whether or not alterations to the structure are involved. The installation of other machinery and equipment is not restricted by the order. Paragraph (b) (3) of VHP-1 defines a fixture as "any article attached to a building or structure and used as a part of the building or structure," and defines mechanical equipment as "any equipment which is used to operate a building or other structure."

Several specific articles are listed in paragraph (b) (3) of VHP-1 as coming within these terms and certain other items are listed as not being covered by these terms. This supplement lists these and other specific items, indicating whether or not they are fixtures and mechanical equipment under VHP-1. It also explains other provisions of VHP-1 applying to these installations.

(b) **Fixtures and mechanical equipment.** (1) The following articles are considered fixtures and mechanical equipment if they are attached to a building or structure by nails or screws, if they are connected with the plumbing or other piping sys-

tem of the structure, if they are connected to the lighting system of the structure (except by connection to an existing outlet without installing new wires or a new outlet), if a base or foundation is built for the item, or if the item is cemented to the building or structure:

Air conditioning equipment (except when used for humidity or temperature control in industrial processing or as refrigeration equipment in a cold storage warehouse or a frozen food locker plant and except self-contained individual units with no duct systems).

Bars.
Bookcases.
Booths.
Counters.
Furnaces and furnace burner or boiler burner units.
Heating equipment.
Kitchen cabinets.
Lighting equipment.
Marquees.
Panelling.
Partitions, wood or metal.
Plumbing equipment.
Signs, electric and other.
Show cases.
Soda fountains.
Ventilating equipment.

Any other article falling within the definitions of fixture and mechanical equipment stated in paragraph (a) of this supplement.

(None of the above items include any item specifically listed in paragraph (b) (2) of this supplement.)

(2) The following articles are never

considered fixtures or mechanical equipment:

Air conditioning equipment where required to provide humidity or temperature control for industrial processing and self-contained individual units with no duct systems.

Airport equipment such as cargo and passenger handling equipment, signaling equipment, obstruction marking equipment and equipment used for lighting runways or for signalling.

Altars, choir stalls and church pews.
Automatic fire protection sprinkler systems.

Barn equipment such as milking machines, hay or litter conveyors, stanchions and stalls.

Blast furnaces.

Control or testing equipment used for industrial or utility purposes or in a laboratory or hospital.

Conversion oil or gas burners.

Conveyors.

Desks, chairs and cafeteria and gymnasium equipment in a school or college.

Escalators, elevators and dumb waiters.

Food warming, dishwashing and food preparation equipment in a restaurant or institution.

Furnaces for heat treating or similar industrial purposes.

Hospital equipment such as X-ray machines and operating tables.

Lighting equipment for flood lighting airports, railroads or other outdoor operations.

Machine tools.

Post-office equipment such as letter boxes and letter drops.

Power generating or transmitting equipment such as boilers, generators, and transformers (except where the primary purpose of the equipment is to provide electricity or steam for lighting or heating the building in which they are installed).

Projection and sound equipment.

Radio towers and other transmitting and receiving equipment.

Refrigeration equipment, such as compressors, in a cold storage warehouse or a frozen food locker plant.

Refrigerators (except where built as an integral part of the building).

Scales.

Service station equipment such as

gasoline pumps, hydraulic lifts, battery chargers.

Stokers.

Storm windows, storm doors, screens and awnings.

Stoves.

Theater seats.

Washing machines or dryers in a commercial laundry.

Other processing machinery and equipment.

Other machinery and equipment installed to provide a special service in a structure and not installed merely to operate the structure.

(c) **Cost of an installation of fixtures or mechanical equipment.** If any item covered by paragraph (b) (1) of this supplement is being installed in or on a building or other structure covered by the order, the cost of the job for the purpose of determining whether it is under the applicable allowance given in paragraph (d) (1) of VHP-1 must include the cost or value of the item (unless it has been previously used), in addition to the cost of new materials, the cost of paid labor engaged in the work and the amount paid for contractor's fees. The cost or value of previously used mechanical equipment and previously used fixtures need not be included in the cost of the job for this purpose. Paragraph (d) (3) of VHP-1 contains additional provisions prohibiting the splitting of a job for the purpose of coming within the exemptions of paragraph (d) (1) of the order.

(d) **Repairs to mechanical equipment.** Paragraph (b) (2) of VHP-1 provides that greasing, overhauling, repairing, or installing replacement parts in existing mechanical equipment in all types of structures, where no change in the structure is made, is not covered by the order, regardless of whether the cost of the job is within the applicable allowance under paragraph (d) (1) of the order, and the cost of such work need not be included in the cost of a job for the purpose of determining whether the job is within the applicable allowance under that paragraph.

This provision applies to plumbing, heating, ventilating and lighting equipment. This provision covers the replacement of parts in a piece of mechanical equipment when the present parts are no longer serviceable but does not cover the replacement of an entire piece of equip-

ment. For example, it is permissible, under this provision, to replace the grates in a furnace but not to replace the entire furnace; to replace the tubes in a boiler but not to replace the entire boiler, unless the total cost of the replacement is within the applicable job allowance under paragraph (d) (1) of VHP-1.

(e) **Installation of exempt machinery and equipment.** VHP-1 does not restrict the installation of machinery and equipment other than mechanical equipment. Paragraph (b) (2) of this supplement explains what equipment may be installed without regard to the provisions of the order. VHP-1 does, however, restrict the making of alterations to a building or other structure covered by the order in connection with the installation of such exempt machinery and equipment.

For example, if a foundation is built inside a building to receive the equipment, or if partitions or new walls are installed to separate a machine from the rest of the plant, the cost of these building alterations must be computed in accordance with paragraph (d) (2) of VHP-1 and if the cost exceeds the applicable allowance for the building involved under paragraph (d) (1) of VHP-1 authorization must be obtained for the work.

In computing the cost of the building alterations, the cost of new materials and paid labor and the amount paid for contractor's fees for the building alteration must be counted (together with the cost of any new fixtures or new mechanical equipment covered by paragraph (b) (1) of this supplement which may be installed at the same time), but the cost of the exempt machinery or equipment, whether new or used, need not be included nor need the cost of labor engaged in assembling the exempt machinery or equipment or in setting it in place and connecting it up.

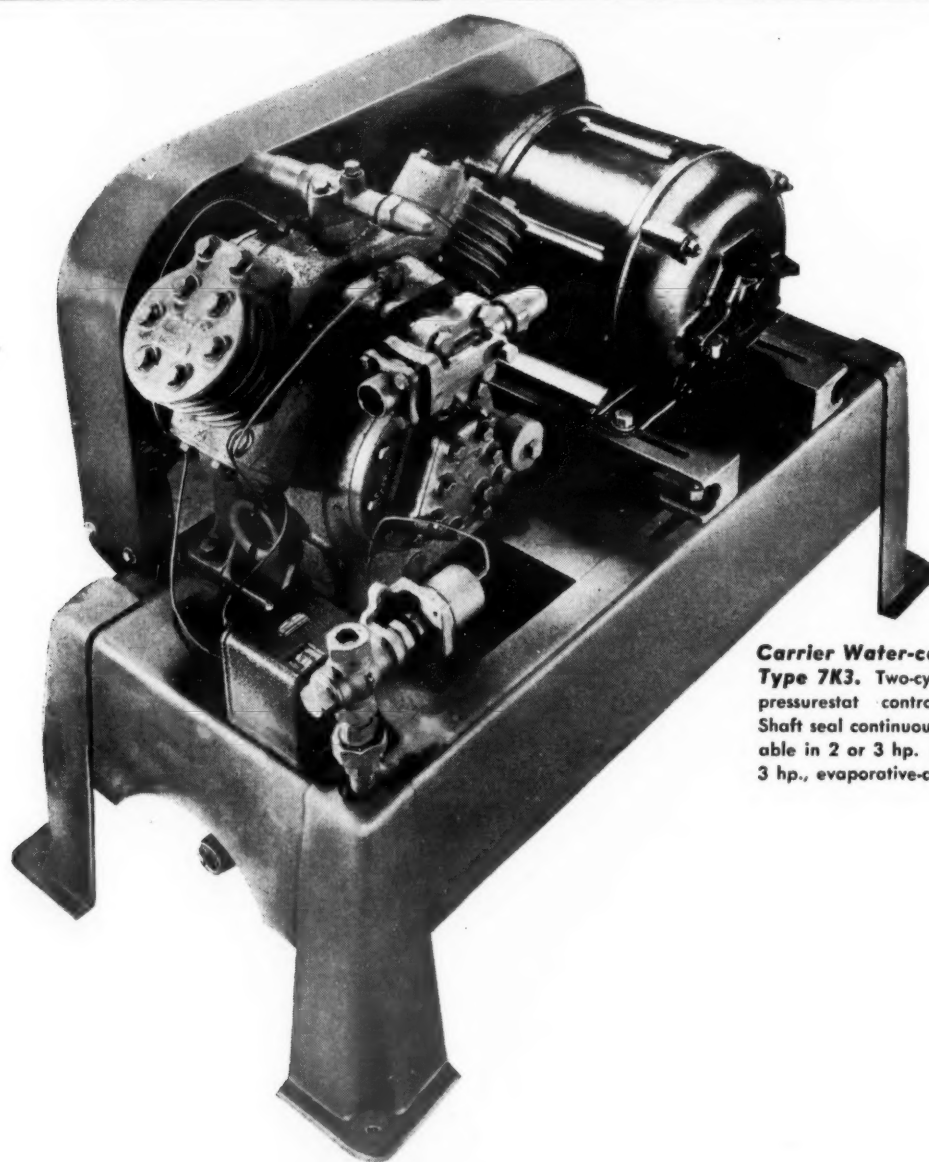
For example, in installing elevators which are listed in paragraph (b) (2) of this supplement, it would be necessary to count toward the cost of the job, the cost of new materials and paid labor and contractor's fees involved in preparing the shaft, in strengthening the building to support the elevator and in constructing a penthouse or bulkhead on the roof of the building or a room in the basement to enclose the motors. It would not, however, be necessary to include in the cost of the job the cost of the elevator car, the guide rails between which the car runs, the sheaves, the motors, the cables or the doors or frames to the elevator shaft or the cost of labor engaged in assembling and installing this equipment.

(f) **Installation of equipment outside and not attached to a building.** Under paragraph (b) (1) of VHP-1, the installation of any kind of equipment outside of and not attached to a building or other structure covered by the order is not restricted by the order.

This exemption applies to mechanical equipment such as a fuel oil tank installed in the ground outside of a house or any other kind of machinery or equipment which is installed outside of and not attached to a building.

The exemption is applicable whether or not a foundation must be built for the piece of equipment and whether or not the equipment is connected to a building by pipes or pipe lines, wires, or the like. The following items are examples of equipment exempt completely from the order if installed outside of and not attached to a building:

Blast furnaces.
Brick or lumber or pottery kilns.
Chimneys of industrial or utility type, constructed of radial brick, reinforced concrete or steel.
Coke ovens.
Fueling equipment.
Lighting systems.
Oil refinery processing equipment such as towers, reactors, heat exchangers and furnaces.
Radio towers.
Scales.
Signalling equipment.
Tanks.
Turntables.



Carrier Water-cooled Condensing Unit Type 7K3. Two-cylinder V-type compressor, pressurestat control, overload protection. Shaft seal continuously immersed in oil. Available in 2 or 3 hp. Air-cooled models in 2 or 3 hp., evaporative-cooled in 3 hp.

Distinguished Refrigerating Service

HERE'S a Carrier refrigerating condensing unit that served with distinction in both peace and war—the 7K3. Its civilian job was refrigerating markets, dairies, abattoirs, locker and bottling plants, and various industrial processes. During the war it served all over the world on landing craft, cargo vessels and with air-conditioning systems for specialized service.

Now the 7K3 is ready again for peacetime jobs. It's a sturdy, compact unit, designed for applications requiring a 2 or 3 hp. compressor. The high-speed two-cylinder V-type compressor is pres-

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The 7K3 is a quality condensing unit—an outstanding product of Carrier's years-long leadership in refrigeration design. That means refrigeration

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Carrier Packaged Air Conditioner, Room Cooler Prices Upped 9% By OPA

SYRACUSE, N. Y.—New ceilings for portable room coolers and self-contained air conditioners manufactured by Carrier Corp. were fixed by OPA in a recent price-adjustment order which includes authorization for Carrier to increase established ceilings by 9.1%.

OPA said the 9.1% increase pertains to "an article which has a properly established ceiling price in effect before the effective date of this order" (April 30). In computing the price boost, the article's "properly established ceiling price" is not to include any permitted increases or adjustment charges, according to the agency.

The manufacturer's maximum price for an article first offered for sale after the effective date of the order will be that "hereafter properly determined or established in accordance with Maximum Price Regulation No. 188," it was ruled. Prices so fixed cannot be increased under the order.

It is further directed that the manufacturer's adjusted ceiling price fixed in accordance with the order "is his new ceiling price if it is higher than his previously established ceiling price including all increases and adjustments otherwise authorized for him individually or for his industry."

Also contained in the order are methods to be used by resellers to determine their maximum prices for

articles sold by Carrier at adjusted ceilings. These methods are explained as follows:

A reseller who had a maximum price in effect before the order was issued "may add to that maximum price an adjustment charge in the same dollar-and-cents amount as the adjustment charge authorized by this order for, and which he has paid to, his supplier."

If a reseller did not have such a maximum price, "he shall first determine a maximum price" (exclusive of adjustment charges), and to that price he may add an adjustment charge in the same dollar-and-cents

amount as the adjustment authorized by this order for, and which he has paid to, his supplier." To find this maximum price, the reseller is directed to "add to his invoice cost, less an adjustment charge stated on that invoice, the same percentage markup which he has on the 'most comparable article' for which he has a properly established ceiling price."

The "most comparable article" is defined as the one which meets all of the following tests:

"It belongs to the narrowest trade category which includes the article being priced.

"Both it and the article being priced were purchased from the same class of supplier.

"Both it and the article being priced belong to a class of articles to which, according to customary trade practices, an approximately uniform percentage markup is applied.

"Its net replacement cost is nearest to the net cost of the article being priced.

"The determination of a ceiling price in this way need not be reported to the Office of Price Administration," according to the order. "However, each seller must keep complete records showing all the information called for by OPA Form 620-759 with regard to how he determined his ceiling price. . . ."

If the maximum resale price cannot be determined under the above method, the reseller is to apply to the OPA for the establishment of a ceiling price under paragraph 1499.3 (c) of the general maximum price regulation. OPA said ceilings fixed under that section "will reflect the supplier's prices as adjusted in accordance with this order."

The adjustment charge determined under the order must be separately

stated on all invoices of all sellers, the agency ruled.

Sales of any articles covered by the order are not affected by Supplementary Order 153, it is stated.

Order 184 under Revised Supplementary Order 119 authorizes the adjustments.

OPA Assigns Ceiling Prices On 2 Commercial Beverage Coolers

CINCINNATI—Order 425, recently issued by OPA under MPR 591, fixed ceiling prices for two models of beverage coolers manufactured by Commercial Mfg. Co. here. They are:

Model No.	Dealers	Consumers
Model No. 23—6 ft.....	\$270	\$448
Model No. 38—9 ft.....	394	654

Gilmer BELTS

When customers ask for replacement belts, be ready to supply them with rugged, long-lived, efficient Gilmer V-Belts—the low stretch belts that always fit—the dependable belts that build goodwill.

There are Gilmer V-Belts for all air-conditioning and refrigeration units. That's because they are made on the largest assortment of V-moulds in the world. Get in touch with your jobber today.

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A part of the PEERLESS line of dependable products for the refrigeration field are these handsome ice cube makers made in styles and capacities for every commercial use. Large volume freezing is accomplished in the shortest possible time by PEERLESS Faster Freeze Cube Makers through installation of continuous refrigerant tubes in each shelf. The range of unit sizes and tray types will equip either standard or special fixtures. Engineering of the superior quality that marks all PEERLESS products is YOUR assurance of superior performance.

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OF HOW FEW PRODUCTS
CAN IT BE SAID
THAT THE FIRST COST
IS THE LAST COST?
WITH STAINLESS STEEL
REFRIGERATOR
SHELVES, FIRST COST
IS THE ONLY COST



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Makers of STAINLESS STEEL AND
RETAINED REFRIGERATOR SHELVES AND WELDED WIRE PRODUCTS

Laundrette Stores May Hit 500 Mark This Year

NEW YORK CITY—The number of Laundrette stores (featuring coin-meter washers) throughout the country is expected to reach 500 by the end of the year, in spite of materials shortages, it was disclosed following a meeting of Telecoin Corp. distribution personnel at the Waldorf-Astoria.

The Telecoin Corp., which holds the laundrette franchise, announced that at present there are 17 laundrette stores equipped with automatic washers in metropolitan New York, three in Chicago, and one each in Los Angeles, South Bend (Ind.), Roxbury (Mass.), Bethlehem (Pa.), Philadelphia, and Boston.

After the housewife places her laundry in the machine and deposits her quarter, she can go on about her shopping duties for about 30 minutes, return to the Laundrette on her way home, and pick up her laundry damp dry ready for ironing.

Col. Murphy Gets Post with G-E New York Appliance Branch

NEW YORK CITY—Col. R. F. Murphy has been appointed advertising and sales promotion manager for General Electric Co.'s appliance district branch here, it has been announced.

Before his entry into the Army in 1941 and service with the Seventy-seventh Division, Col. Murphy was associated with Arthur Kudner, Inc., advertising agency here.

New Branch Manager



EDWARD B. MAIRE

Maire to Manage General Controls Chicago Plant

CHICAGO—Appointment of Edward B. Maire as manager of the Chicago factory branch of General Controls Co. was recently announced by J. F. Ray, director of sales.

Mr. Maire will head up the company's activities in Illinois, Indiana, Wisconsin, Iowa, Minnesota, North Dakota, and South Dakota.

Kaiser Homes Will Not Include Major Appliances

LOS ANGELES—Leaving the market open to appliance dealers, prefabricated homes to be produced by Kaiser Community Homes here will not include major appliances as was originally intended, announces W. C. Rodd, director of public relations.

The company indicated that it had encountered enough difficulty in obtaining construction materials for the homes themselves without taking on the added problems of finding appliances.

Heating plants, hot water heaters, and other such basic equipment will be included in the homes, but refrigerators, ranges, washers, dishwashers, and other major appliances will have to be purchased separately by the individual home buyer.

Several hundred homes are scheduled for a project in the Westchester district here, while others will be erected in North Hollywood, Monterey Park, Ontario, and San Jose. Two and three-bedroom homes will be included.

Completion of the home will require an estimated 60 days after construction is started, but the Kaiser company will not be ready to produce the floor and wall sections for 30 to 60 days, pending finishing of a plant near here.

Branch Heads Appointed By G-E in 3 Cities

BRIDGEPORT, Conn.—O. S. Simpson, L. K. Ennes, and C. E. Curtis have been appointed branch operating managers for the General Electric Co. in Pittsburgh, Philadelphia, and Cincinnati, respectively, it was announced recently. These men will be responsible for the financial, accounting, and product service activities in each of these districts.

Mr. Simpson joined G-E in 1935 and has held positions in the accounting and financial divisions in Schenectady, N. Y. He is a graduate of the University of Pennsylvania. Employed previously by G-E in Schenectady, N. Y., Philadelphia, and in this city, Mr. Ennes took his first job with the company in 1929. He is a graduate of De Pauw university.

Prior to entering the army in 1941, Mr. Curtis was operating manager of G-E's Florida appliance distributing branch. His college work was at the District of Columbia college.

OPA Ceiling Prices Set For 5 Firestone Washers

AKRON, Ohio—Five models of washing machines manufactured here by the Firestone Tire & Rubber Co. were assigned ceiling prices for sales to ultimate consumers by OPA Order 21, RMPR 86.

Model	Zone 1	Zone 2
5-B-2	\$ 71.35	\$ 76.35
5-B-3	81.45	84.45
5-B-4	102.05	112.05
5-B-5	52.20	54.20
5-B-6	58.35	60.35

These ceilings are subject to each retail seller's customary terms, discounts, allowances, and other price differentials in effect on sales of similar articles, OPA said.

Correction

A recent story in the NEWS concerning the appointment of Floyd & Co. as Servel distributor in Cincinnati did not specify that this firm distributes only Servel's gas-fired appliances. Servel's commercial electric refrigeration line is handled in Cincinnati by Twentieth Century Refrigeration Co. and Hamilton County Stores, Inc.

Amana HOME FREEZERS

- MODERN
- FREEZER-COOLERS
- HOME FREEZERS from 5 to 123 cu. ft. food capacity
- COOLERS

Refrigeration Division
AMANA SOCIETY
AMANA, IOWA

REFRIGERATION SUPPLIES

We stock a complete line of refrigeration supplies and equipment for immediate delivery.

Send for our 1946 circular

G & E Equipment Supply Co.
400 N. Sangamon Street
CHICAGO 22, ILLINOIS

"COMPARISON"

Measured by the yard stick of experience, this dealer's choice is Commercial Credit service.

"The years we have done our financing with you have been unusual, first being a volume period and then war times. We have found you flexible under both conditions and invariably willing to take care of our needs and to be of assistance in our plans.

"Prior to our connection with you in 1938 we used several other financing connections so when we say your service is excellent we have a basis for COMPARISON.

"We have nothing but praise for the cooperation you have always extended to us."



John T. Vidmar Jr.
Vidmar-Mathis Appliance Co.
Pueblo, Colo.

COMMERCIAL CREDIT COMPANY

BALTIMORE 2, MARYLAND

Capital and Surplus more than \$80,000,000

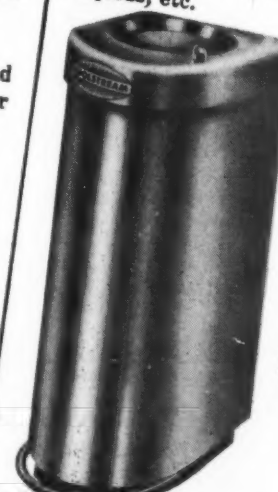
cool - cooler - coolstream

itive
ully
bly
er-
ish

cool—adj.—slightly or moderately cold; v.t. to become cool

cool-er—n.—that which cools; a vessel for cooling liquids, etc.

id
or



cool-stream—n.—the superlative in electric water coolers. Skillfully defined in superior materials. Ably engineered for distinguished performance. Designed conveniently with a one-piece stainless steel cabinet—easily removable without tools and showing harmonious consideration for all interiors. Synonym: satisfaction

Send for catalog

THE COOLSTREAM
CORPORATION
240 BUTLER STREET, BROOKLYN 17, N. Y.

EVOLUTIONARY IN ENGINEERING • REVOLUTIONARY IN DESIGN

Misleading Appliance Dealers Attacked In Boston Dept. Store Advertisement

BOSTON—To counteract dealers who have been advertising about "large stocks," "quickly delivered appliances," etc., when actually they have nothing but samples on hand, the R. H. White Dept. store here recently ran a half-page advertisement purporting to "tell the truth about the postwar appliance situation."

Referring to the misleading statements of other dealers, the store management declared: "We believe that this type of promotion does far more harm than good. The customer who hopefully checks his bank account and dashes down to buy a badly needed refrigerator or washing machine is going to be sorely irritated when he finds that all the store can give him is promises."

In its advertisement R. H. White pointed out that, since the store is anticipating monthly shipments of only a few refrigerators, freezers,

washing machines, no merchandise would be offered for sale that wasn't actually in stock. Figures were quoted showing the number of refrigerators received per month since V-J Day, and explaining how strikes and other delays would hold up normal stocks still longer.

The store further promised that it would not run sensational promotions on non-existent inventory. Since most deliveries to date had been made via the priority registration system, usually necessitating a wait of from two to four months, R. H. White expressed no hope of fulfilling all the demands of its customers for a year or more to come. Customers, however, were urged to visit the store periodically to keep abreast of any change in the availability of appliances.

The store feels that the advertisement has inspired goodwill and confidence for the store.

Correction on NEWA Report:

Group Made No Reference to Including Cost Of 'Pigtails' in Price of Electric Range

An important point in the committee reports given at the thirty-seventh annual convention of the National Electrical Wholesalers Association, which met in Chicago April 21-25, was the subject of electric range pigtails.

This discussion was incorrectly reported in the NEWS of May 6, page 9. The following paragraphs taken from a letter from Alfred Byers, secretary of NEWA, details the facts as recorded in a transcript of the discussion:

"The chairman suggested that the committee consider the present situation in regard to the handling of 'pigtails,' about which, he stated, there has been some discussion heard within the industry.

"He mentioned that difficulty is being experienced by appliance distributors from the fact that manufacturers of electric ranges ship

them to their distributors without 'pigtails.' The problem, he said, was further complicated by the existence of regulations in some communities prohibiting the use of 'pigtails' and insisting upon a more permanent means of range installation.

"The foregoing discussion established the point that, so far as the manufacturers are concerned, it was generally believed by those present that if utility companies and electrical codes would standardize equipment for range installations, the manufacturers themselves would gladly comply with such standards.

"The fact was mentioned also that 'pigtails' themselves are made with various combinations of wire, and that this also is a factor to be taken into account in the consideration of the overall problem of the use of 'pigtails.'"

"It was the consensus of the meeting that this problem be called to the attention of the Edison Electric Institute with the suggestion that they consider it from the standpoint of bringing about some simplification in the use of 'pigtails,' as well as in the range installation practice to be followed in various sections of the country."

"You will notice (Mr. Byers adds) that no reference whatever was made, or implied, for manufacturers (quoting the NEWS) 'include the pigtail price as part of the figure for electric ranges.' The subject was discussed purely as a problem related to the actual installation of electric ranges in consumers' homes."

Crosley Distributor Moves

SEATTLE—Commercial Appliance Co., distributor for Crosley Corp., has moved to 1534 First Ave. South, in this city, it is announced by P. W. Bialkowski, sales manager.

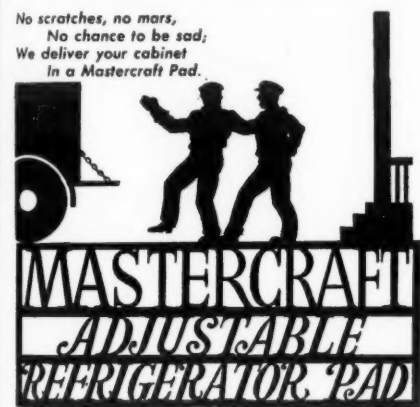
The new location will improve the company's service to dealers, and provide for better display space, they claim.

Apex Electrical Quarterly Report Cites Heavy Loss

CLEVELAND—Heavy losses during the first quarter were reported by C. G. Frantz, president of the Apex Electrical Mfg. Co. here.

The losses were due to a production stoppage during February and March caused by the steel strike, together with failure of the OPA ceiling prices to reflect rising costs of materials and labor, he said.

Tax carryback credits offset the losses to a considerable extent, he added.



NATIONALLY ENDORSED

No scratches—no mars—no delivery woes, when that shiny new refrigerator is protected by a Mastercraft Adjustable Refrigerator Pad. Sturdily constructed, it provides ample protection. It's economical too, only \$11.75 each, and it's adjustable to any size cabinet.

The Mastercraft Adjustable Carrying Harness at \$8.50 each makes delivery of your refrigerator easy.

Attractive lettering of your name on pad at \$2.00 each extra.

Write today for complete folder and prices on pads for refrigerators, home freezers, washers, ironers, ranges, radios; also furniture pads and protective slipcovers.



BEARSE MANUFACTURING CO.
Incorporated 1921
3815-8825 Cortland Street
Chicago 47, Ill.

Every Motor Repair Shop

needs this fully-illustrated easy-to-read Motor Parts Catalog—form MU-40.

Send for your FREE copy today!

Wagner Electric Corporation
ESTABLISHED 1914
2442 Plymouth Avenue, St. Louis 14, Mo., U.S.A.
ELECTRICAL AND AUTOMOTIVE PRODUCTS

SUPERIOR VALVE & FITTINGS COMPANY
Pittsburgh 26, Pennsylvania

VALVES, FITTINGS & ACCESSORIES
For All
• Refrigeration
and
• Air Conditioning
Systems

No end to display **SELLING!**

• Floor display can do a tremendous emotional selling job... the kind that makes a prospect FEEL she should own the appliance, instead of just thinking about it.

In appliance stores the country over, not one display in ten does the best possible job with all customers. Not enough importance is attached to arranging appliances to answer these customer-questions at a glance:

*What is it? Why look at it?
What does it do? How does it do it?
Does it open up to show more?*

• For an effective range display, follow these simple steps: Group enough ranges together to shout to a customer: "Here are the ranges!" An overhead banner says: "See the important new convenience features of the Hotpoint Automatic Electric Range." As the customer comes closer the group "stops talking" in favor of a range that calls the customer's attention to a single feature with a sign: "This range cooks a meal for 8 people automatically." The specific appeal brings the customer over to see how it is done. She will want to open the oven door and investigate all the other important features.

The display has done a SELLING job!

Copyright 1946 Edison General Electric Appliance Co., Inc., Chicago

Hotpoint

HOME APPLIANCES

Dependability Assured by 40 Years Experience!



Refrigerators



Ranges



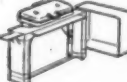
Water Heaters



Home Freezers



Clothes Washers



Flat Plate Ironers



Clothes Dryers



Dishwashers



Disposals

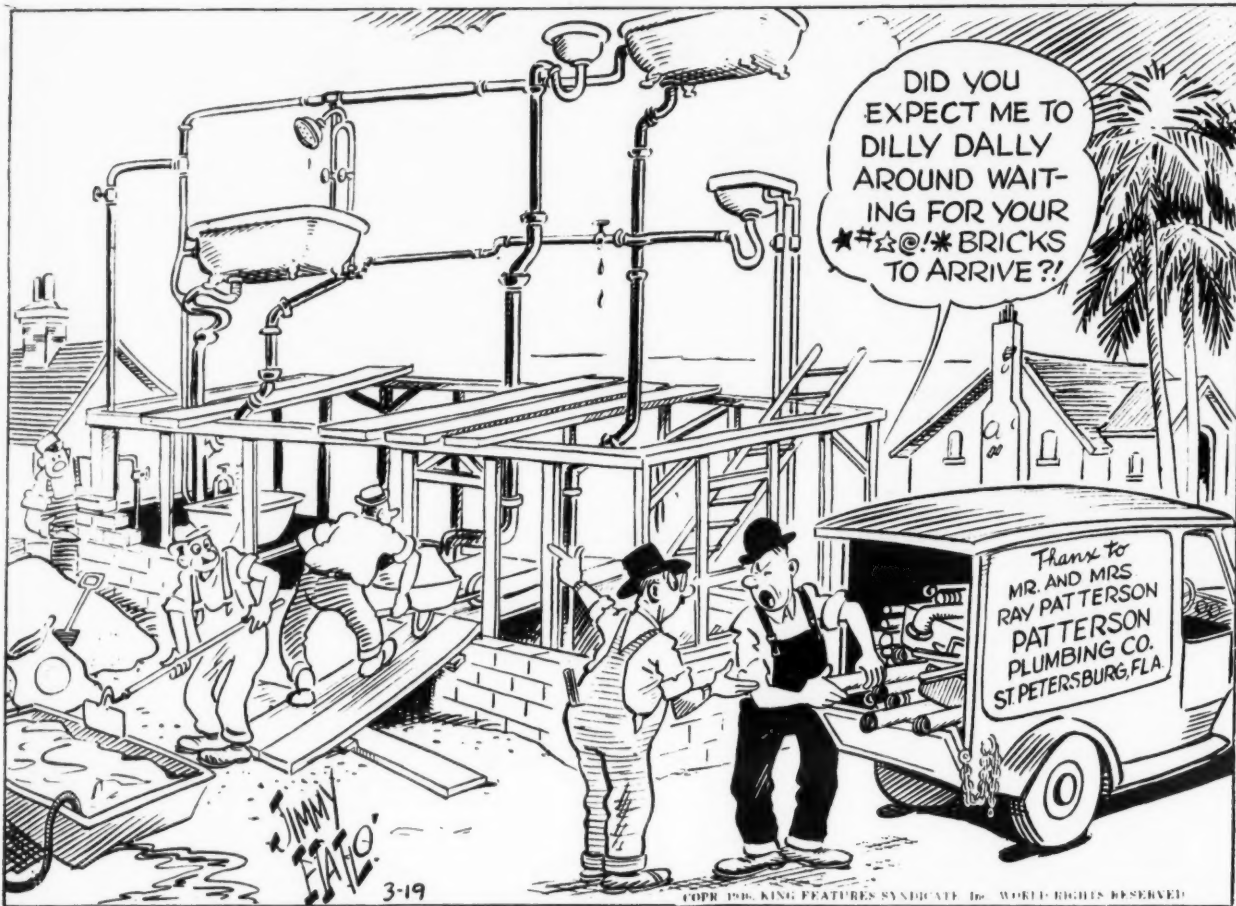


Cabinet Sinks



Steel Cabinets

They'll Do It Every Time By Jimmy Hatlo



☆ Buy VICTORY Bonds ☆

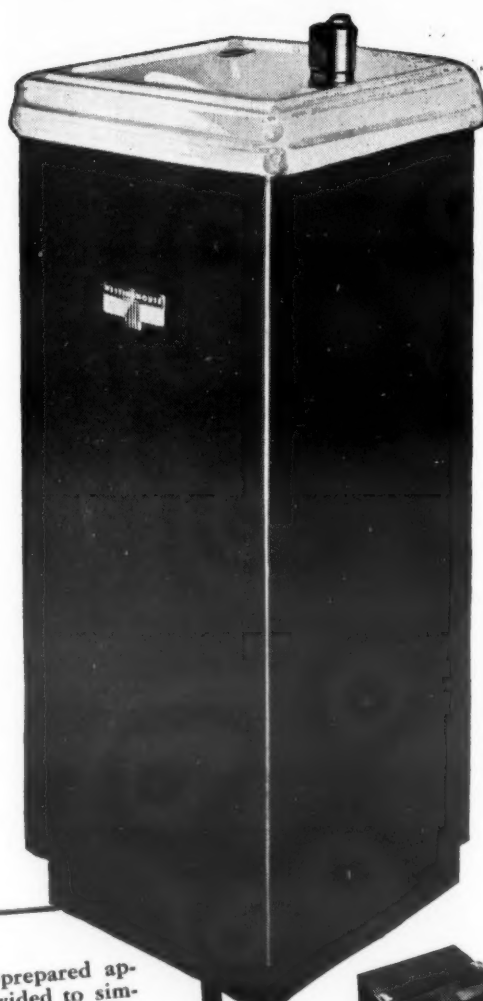
More Sales—Minimum Service with Westinghouse Water Coolers And the Price is RIGHT!

With the complete line of Westinghouse Water Coolers, you can meet the requirements of all your customers. For Westinghouse builds bottle coolers, standard coolers and explosion-proof coolers—models for all kinds and types of applications . . . from the small office to the busy store or factory. They are designed with an eye to your merchandising problems . . . making easier your sales, installation and service.

Westinghouse Water Coolers are practical, efficient, low-cost equipment which will satisfy the buyer and lead to more sales.

These units are powered by the famous Westinghouse hermetically-sealed refrigeration unit . . . completely sealed against dirt and moisture. Years of research and development by Westinghouse engineers assure your customers a long period of economical, trouble-free service.

A Westinghouse Water Cooler is but one of a complete line of Packaged Refrigeration Products . . . backed by effective advertising and sales helps . . . Our representative will show you our complete package portfolio of practical selling helps—The Refrigeration Specialties Handbook. A Westinghouse franchise will provide you with the sales advantages of this complete line.



EASY TO APPLY—Complete factory-prepared application data and capacity tables provided to simplify your job.

EASY TO INSTALL—Complete packaged units ready to plug in—no wiring or assembling necessary.

EASY TO SERVICE—Complete and detailed factory instructions specially developed for dealer servicing—hermetically-sealed construction simplifies replacement if necessary.

FOR DETAILS about the availability of these products write to Westinghouse, 653 Page Blvd., Springfield 2, Mass.

Packaged Refrigeration by **Westinghouse**

WESTINGHOUSE ELECTRIC CORPORATION • REFRIGERATION SPECIALTIES DIVISION • SPRINGFIELD 2, MASS.

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark
registered
U. S. Patent
Office:
Est. 1926



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Business News
Publishing Co.

F. M. COCKRELL, Founder

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Is The Concept of Justice A Silly Notion Today?

TWICE in recent years our House of Representatives has passed, by whopping majorities, a measure known as the Hobbs Anti-Racketeering Bill.

Its terms would make it a felonious offense for labor union members or officers to rob or extort firms or individuals engaging in interstate commerce. Can anyone argue with that premise? Robbery and extortion simply can't be tolerated in a democracy. Agree? Well . . .

The Roosevelt-packed U. S. Supreme Court has held that such robbery or extortion is perfectly legal if indulged in by a labor union.

Can one pressure group of Americans thumb its nose at the Laws of the Land? The House of Representatives, properly indignant, thought not.

But the Senate—ah, that was a different matter. For years the Hobbs Bill was buried in a conveniently dark Senate Committee pigeon-hole.

The Senate Sets Up An Elite Class of Untouchables

Recently, in response to overwhelming pressure from constituents (chiefly farmers) this praiseworthy bill was reported out, and arrived on the Senate's agenda. But wait . . . the Hobbs Bill, when the Senate Labor Committee finally gave it headway, was so emasculated that you'd never recognize it.

By a vote of 5 to 4, this Committee recommended that robbery and extortion by labor unions be made a *misdemeanor* (rather than a felony). Furthermore, the Senate version of the bill held that labor terrorists can commit a *misdemeanor* (by robbery or extortion) only when they employ violence or threats to prevent a farmer from transporting perishable products, or to require him to pay tribute to a labor union.

Any other citizen of the United States would have no protection.

Who Rules America? Answer: WE Don't

See how we are governed by pressure groups?

Under this measure, racketeering is a felony for all United States citizens *except* those who pay dues to labor unions. For these privileged characters, it's only a *misdemeanor*.

Furthermore, racketeering labor union members are culpable only if they annoy farmers. If they hamstring business men, they can't be brought to account at all.

Never in the history of American legislation has so open-faced a kowtowing to organized pressure groups been so transparent.

Who rules America, anyhow? Answer: Today it's the CIO, the Farm Bloc, and the Roosevelt Appointees.

How about the Common Man who still inhabits these United States of America?

Is this to be His Century?

Lift Refrigerating Machinery Ceiling To Aid Food Industry, Smith Tells Senate

Editor's Note: This is part of the statement made by Sterling Smith of Baker Ice Machine Co. to the Senate committee considering the Price Control Bill.

I am very grateful for the opportunity to appear before this Committee to present this statement on the pending legislation to extend the Price Control Act. My plea is not only for my own company but for the entire refrigeration industry, for what affects us affects the whole industry.

Baker Ice Machine Co. is a small concern employing some 160 men and women. I believe our activities and experiences of recent years are to a great extent representative of the activities and experiences of all small American business, which supplies 60% of the producing power of our country.

During the war we worked long hours. We were short handed. We produced to our full capacity. We looked forward to peace and to the reconversion period. We thought, in common with all American industry, that the new techniques discovered during war production would lead us as a nation to a higher economic level than we had before achieved. I consciously refrain from the phrase "return to normal," for our expectations were high, and the word "return" smacks of retrogression as the term "normal" suggests mediocrity.

I do not need to tell you how sore has been our disappointment. But I believe I speak for the great majority of small businessmen when I say we have not yet given up those high

expectations, despite the road-blocks ahead.

Let me analyze this situation briefly. The classes of goods to which I refer are not those entering into retail trade. They are not things the people must buy, whatever the cost. They are the machines, the machine tools, machine parts, industrial refrigerating machinery (as produced by my company), processing machinery, and much other equipment, all of which are essential for the stimulated manufacture of the articles sold in retail trade.

The question is whether the maintenance of price control over these capital goods—which are so imperatively required by the manufacturing plants in order to complete their

reconversion—contributes to lower prices on articles sold to consumers, or whether, on the other hand, these controls are no more than burdensome regulations, consuming the time of both government and industry, that in the end result in lowered efficiency, reduced productivity, and higher prices for consumer goods—which is precisely the opposite condition from what the OPA is supposed to achieve.

Our modern meat industry would be impossible without refrigeration. So would our dairy industry and our supplies of fresh milk. Refrigeration is quite obviously the basic factor in frozen foods, which are of increasing importance in the nation's supply of fresh vegetables, meats, fish, and other products. To sum up, every man, woman, and child in the United States who is more than a few hours removed from a source of fresh food is dependent on the products of the refrigeration industry.

Whatever may be the view as to the necessity of stimulating the manufacture of capital goods needed by other industries, none can question it with respect to the refrigerating equipment needed by our food

industry. Here is an obvious case where full-scale production of capital goods means greater efficiency and lower consumer costs.

The production of refrigerating machinery cannot meet these demands. Our failure in this regard is not due to lack of facilities nor to lack of desire to produce. It is due partially to our inability to make definite commitments or future plans under the present price ceilings.

The placing of a supply schedule is a gamble. I need not explain that the increased costs and uncertainty regarding labor, raw materials, and purchased components are such that our profits are negligible under the best circumstances.

If the price ceilings on refrigeration machinery are lifted now, I believe the manufacture of that equipment will surprise you by its production rates, and that the temporary distortion caused by plants retooling to make the most profitable product, rather than the product to which they are best suited, will be quickly erased. This is anything but an inflationary result.

Some fear that the price rises which would follow the removal of

OPA restrictions on refrigerating machinery would cause another upward spiral, if not a runaway, inflation. I can only say that these persons do not know the nature of capital goods transactions.

The reasons for the expanding need for refrigeration are basic to a free economy. The uses of refrigeration represent a saving in time or money, or make for a better product. Like all capital goods, refrigerating machinery must pay for itself, or it will not be used. This would act to prevent unreasonable price rises.

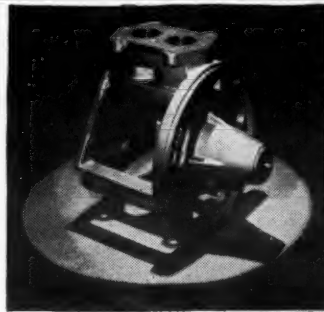
Added to that, competition in our industry would be the determining factor in our pricing.

Some of our distributor contracts go back 25 and 30 years. We know each other's problems, and we know each other's needs. We would hardly sacrifice our company's future for short-term profits when we can keep going on a reasonable basis with our established customers.

In conclusion, I believe there is much anti-inflationary good to be derived from the removal of the price ceilings on refrigerating machinery and no inflationary effects to make it dangerous.



PRECISION MAKES PROFITS . . . When you sell Servel*



HOW MICROMATIC HONE CUTS YOUR SERVICE COSTS

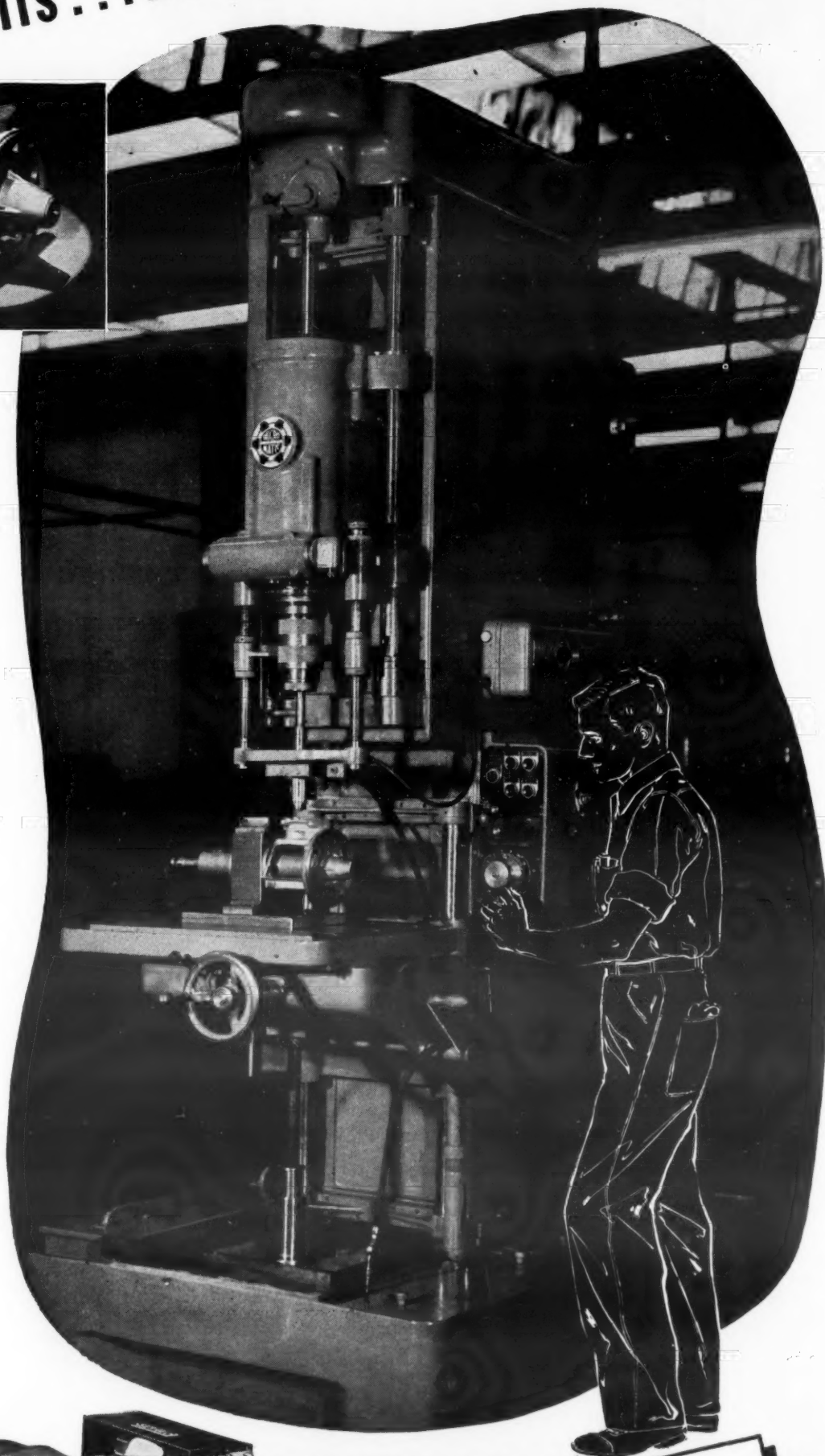
The tall machine pictured at the right is one of the reasons why service costs on Servel condensing units are lower . . . and profits higher! It's a micromatic hone, one of the most highly refined precision honing machines ever developed by the machine tool industry.

This micromatic hone reduces wear on cylinder bores for Servel units by finishing them to the closest tolerances ever obtained on this type of mass production manufacture. It does this by means of four tiny hones, each smaller than a man's little finger.

After initial adjustment, these hones polish the bore from end to end to an exactly predetermined diameter, within limits of a few ten-thousandths of an inch! When the proper size is reached, the machine stops itself. The great bulk of the machine helps guide the cutting members, and makes possible extreme accuracy in dimension, shape, and finish of the bore.

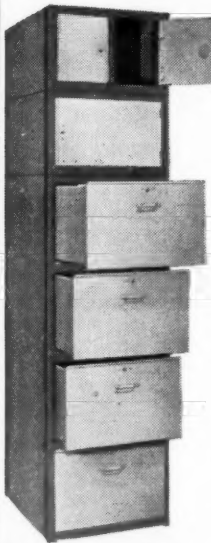
This type of tooling insures the finest possible condensing unit at the lowest practical cost. It makes extra profits for dealers and fixture manufacturers through lowered sales costs, lowered service cost, and reduced customer turnover.

Get your copy of Servel's new folder, "Servel Supermetic," today. Send postal to Servel, Inc., Division RN, Evansville 20, Ind.



**ASE FROZ-N-FOOD
LOCKERS**

**THE LOCKER LINE
THAT SELLS**



New and added profits are provided for you with A-S-E Froz-n-Food Lockers. For A-S-E's the profit line of lockers. Note their features, such as: glide-easy drawer action, smooth two-tone finish; drawer units are factory assembled, steel construction—these and other features make A-S-E Froz-n-Food Lockers easy to sell.

A-S-E is America's preferred locker. The locker for extra profits, complete customer satisfaction. Write today for more information.

ALL-STEEL-EQUIP COMPANY, INC.
450 GRIFFITH AVE. AURORA, ILL.

**"RECORD"
WATER DEFROST**



REFRIGERATION ENGINEERING INC.
LOS ANGELES - CALIFORNIA

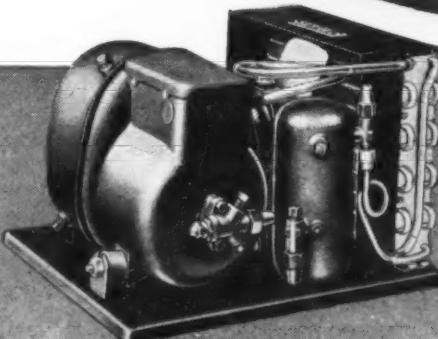
**PURO ELECTRIC
WATER COOLERS**

**BRANCHES
IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.**

**PURO FILTER CORP.
OF AMERICA
DRINKING WATER
SPECIALISTS FOR 40 YEARS.**

*Servel's new "Supermetic" condensing units will serve dealers and fixture manufacturers in every vital field

- | | |
|---------------------|---------------------------|
| 1. STORE FIXTURES | 6. ROOM COOLERS |
| 2. MILK COOLERS | 7. FARM FREEZERS |
| 3. HOME LOCKERS | 8. WATER COOLERS |
| 4. BEVERAGE COOLERS | 9. INDUSTRIAL COOLING |
| 5. VENDING MACHINES | 10. VEHICLE REFRIGERATION |



Servel, Inc.
Electric Refrigeration Division, Evansville 20, Indiana

This is one in a series of advertisements featuring the new machine tools and processes being used to produce Servel Supermetics. Reprints available to dealers individually or in sets as series progresses.

Freon Condensers • Dry-Ex Water Coolers
• Evaporative Condensers • Forced Con-
vection Units • Oil Separators • Liquid
Receivers • Heat Exchangers • Pipe
Coils • Hi-Peak Water Coolers • Flooded
Water Coolers • Ammonia Condensers
Write for Catalog on any item

ACME INDUSTRIES
JACKSON, MICHIGAN
Offices in principal cities

At the Philadelphia Frozen Food Exhibition



At left is one of the display booths at the recent Philadelphia Frozen Food Show. Shown are Philip Baker and Harry Hanover, both of the Jordan Refrigerator Co.'s Philadelphia office, and Albert Fogel, national sales director for the firm. Jordan cabinets were used in this and other exhibits.

New Appointment



PAUL HUNKER
* * *

Paul Hunker Takes Post With Refrigeration Corp.

PERTH AMBOY, N. J.—Paul A. Hunker, for the past seven years general sales manager of Nathan Straus-Duparquet, Inc., has been appointed national commercial sales manager of the Refrigeration Corp. of America, reports John Bess, president of the firm, which is a subsidiary of Noma Electric Corp.

In his new post Mr. Hunker will supervise national sales of "Frigid Freeze" cabinets, walk-in commercial quick-freezing units, and "Reca" air conditioning units.

Prior to 1939 Mr. Hunker was at various times responsible for the commercial sales programs of Rex Cole, Inc., General Electric Co., and P. Cooper Jr., the announcement said.

At Refrigeration corporation's new plant here the firm will be capable of producing several times the output of its former plant and a large proportion of this increase will be in the commercial field, stated Mr. Bess.

Connecticut Dealer Plans Move to Larger Quarters

TORRINGTON, Conn. — Rocco Galgano & Co., now located at 258 Main St. here, has purchased property at 625 Main St. where Mr. Galgano plans to move his home appliance business in the near future. The new location will provide larger quarters and ample parking space.

United Wire Brass Mill Price Boosts Are Listed

PROVIDENCE, R. I. — General price increases effective May 1 on Brass Mill Products manufactured here by the United Wire & Supply Corp. are:

Seamless copper tube
base price 23.48¢ lb.
Seamless brass tube
base price 24.85¢ lb.
Seamless brass wire
base price 22.38¢ lb.

Aluminum tube and wire prices are advanced by new price schedules effective on shipments after May 6. These increases will be made public in the near future.

Fedders-Quigan Water Cooler Prices Raised

BUFFALO—Fedders-Quigan Corp. here was recently granted an optional 18.8% increase in the Oct. 1, 1941, net prices for its line of electric water coolers.

The price adjustment is authorized by Order 180 under Revised Supplementary Order 119. Ceilings established under MPR 591 may be continued if they are higher than those permitted by the adjustment order.

All resellers—except manufacturers who purchase the coolers for use in the manufacture of other products—are allowed to add to their current ceilings the actual dollars-and-cents increase in cost resulting from the adjustment granted the manufacturer.

6 Day & Night Evaporator Models Get OPA Ceilings

MONROVIA, Calif.—Six models of plate type evaporators manufactured here by the Day & Night Mfg. Co. were ceiling priced at the following levels by OPA Order 450, MPR 591:

Model	On sales to—	Distributors	Dealers	Consumers
AL-14-6-14	\$ 5.55	\$ 7.71	\$15.42
BS-19-8-19	7.52	10.45	20.90
XBS-22-10-72	17.85	24.85	49.61
XBS-22-10-48	12.93	17.96	35.93
AL-22-10-30	9.98	13.85	27.71
BS-21-10-21	8.36	11.61	23.22

These prices are subject to the usual discounts and allowances and the extension of services as favorable as those extended to purchasers of the same class on Oct. 1, 1941, OPA said.

NOW! Complete Stock Prompt Shipment

FORGED FLARE NUTS AND FITTINGS

Electrimatic

2100 INDIANA AVE CHICAGO 16 ILLINOIS



IS FOG

ON YOUR PAYROLL?

Fogged display cases lose sales for your customers by making it difficult for buyers to see products. But fog-free cases, glazed with Libbey-Owens-Ford Thermopane, increase sales...let the customers see at all times.

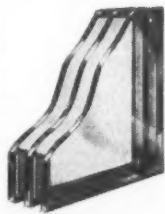
The air between the multiple panes of glass in each Thermopane unit is thoroughly cleaned, dried and hermetically sealed in at the factory with a metal-to-glass bond to guard against entrance of dirt and moisture. All interior glass surfaces are specially washed at the factory. This scientific fabrication insures both better vision and efficient insulation.

Thermopane is made to exact specifications. It is installed just like a single pane of glass. Because it is installed as a unit, labor costs are reduced.

Equip your cases with Thermopane, the insulating unit with the important 5 advantages. Special literature available. Libbey-Owens-Ford Glass Company, 1256 Nicholas Building, Toledo 3, Ohio.

GET THESE 5 ADVANTAGES OF THERMOPANE

- 1. INSULATING AIR SPACE.** The layer of air inside the Thermopane unit is scientifically cleaned, dried and hermetically sealed at the factory. This sealed air space gives Thermopane its high insulating efficiency.
- 2. L-O-F'S BOMDERMETIC SEAL.** This metal-to-glass seal bonds the panes of glass into one unit to guard against dirt and moisture entering the air space.
- 3. CLEARER VISION.** The sealed-in dry air greatly reduces the possibility of condensation.
- 4. ONLY TWO SURFACES TO CLEAN.** The glass surfaces inside a unit are specially cleaned at the factory. No extra cleaning is required.
- 5. FABRICATED TO SIZE.** Each Thermopane unit is manufactured to your exact specifications—requires no cutting or trimming, and is easily installed like a single pane of glass.



WHEREVER VISION IS IMPORTANT
USE L-O-F Polished Plate Glass

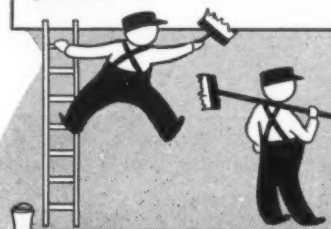


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The PIONEER FLUID DEHYDRANT

1. New or reconditioned units, before starting up, should have THAWZONE to destroy those tiny amounts of moisture that even careful workmanship cannot always avoid, and to prevent future trouble.
2. Systems now operating perfectly need THAWZONE now to prevent future moisture. It's economical insurance.
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TODAY AND EVERY DAY

TRACE
REFRIGERANT
LEAK DETECTOR

Add TRACE at any time to any refrigeration unit containing any refrigerant to:

1. Find present leaks.
2. Spot future leaks.
3. Locate the source (leaks) of moisture troubles.

TRACE has that vivid, stay-red color. It's manufactured by chemists with long experience in refrigeration, who understand the special and exacting requirements that must be met by any additive to a refrigeration system.



HIGHSIDE CHEMICALS CO.

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NEWARK 4, N. J.

Applications of High Side Floats In Low Temperature Systems Discussed

By Ed Kellie, Vice President, American Injector Co.*

The high side float is a simple, rugged, and tamper-proof metering device for use in refrigerating systems.

A dirty system with sludge and carbon circulating with the refrigerant can injure seriously the operation of a refrigeration system, but where a high side float is used it keeps right on operating because the dirt and sludge can settle into the bottom of the shell and the needle and seat mechanism being at all times in the liquid refrigerant are continually being flushed and so do not become sticky.

Since the high side float is in the hot liquid side of the system the moisture can go on through without freezing and since the liquid evaporates in an accumulator moisture is not separated from the refrigerant until it reaches this stage where there are no fine orifices to be plugged with ice.

Hundreds of thousands of household refrigerating units using high side floats have been in operation for 15 or 20 years and are still operating without any service through all those years.

Shortly before the war, manufacturers of ice cream cabinets had begun to use "Freon-12" as a refrigerant because of its suitability for the lower temperature operation required. Various types of refrigerant control were tried, including the high side float. Unfortunately most who tried this used one designed for SO₂, found it would not open and many decided "Freon-12" would not work on a high side float.

Some, however, did not give up so easily and just simply sent in an order for "a high side float to operate on 'Freon-12' with a 1/4 or 1/2-hp. compressor," carefully explaining that an SO₂ float would not be acceptable. In response to these requests the simplest thing happened; we checked the operating conditions of a "Freon-12" charged unit, calibrated our float mechanism to suit, and the thing worked. Not only that, but we found the same float also works on SO₂ and CH₃Cl.

Its operation permits uniform temperature throughout the evaporator. This can readily be understood when one considers the following facts.

This unit is charged with sufficient refrigerant to permit complete flooding of the coil. The amount of charge is not very critical since an accumulator provides not only a boiler space for the gas to form and be drawn off through the suction line, but it also provides a reservoir in which the liquid level can be varied from say 1/4 of its volume to 3/4 of its volume.

The amount of the charge will govern the low side pressure; a system which is running at too high a

low side pressure can be purged until the required pressure and hence evaporator temperature have been arrived at.

After this amount of charge has been arrived at it is usual for manufacturers to put in a weighed charge, but for service work a unit can be charged until the frost line shows on the suction line or until the latter becomes cold to the touch and afterwards a small amount of purging is sufficient to bring the pressure down to that required.

After the unit is charged and cycling starts, the operation is simply one of the evaporated gas being drawn off and compressed and passed as liquid from the condenser to the high side float. As the load increases gas is formed faster and is passed as liquid to the high side float where it raises the float mechanism to expose sufficient orifice to permit the flow of the liquid to the evaporator at the same rate at which it is being boiled off. As the load decreases less gas boils off and therefore less liquid goes to the float and hence less liquid is fed to the evaporator.

All of this serves to give the following results:

First: The flooded evaporator is filled with liquid which is maintained at a pressure which by all the laws of physics must be uniform throughout the evaporator and consequently the temperature must be uniform throughout.

Second: Since gas must boil off the liquid before it can be drawn to the compressor, obviously any change in load causes immediate change in the amount of refrigerant going to the evaporator.

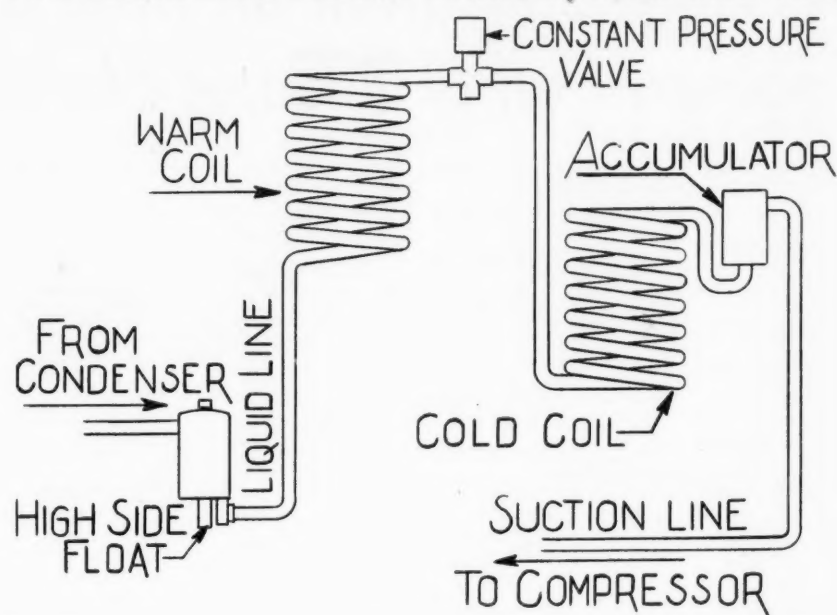
The high side float operates in the same way to provide the low temperatures necessary for home and farm freezers.

The fact that all of the evaporator surfaces (shelves, or liner, or both) in a home freezer must be fully refrigerated makes the capillary tube metering device not too satisfactory because it must be remembered that the amount of refrigerant passing to the evaporator is the governing factor in maintaining uniform temperature throughout.

The effect of the capillary tube is to present a pressure drop between the high side and the low side. Consequently, while the pressure drop remains constant, high side pressures will vary with varying ambient temperatures and low side pressure will vary with loading conditions. These result in varying the amount of refrigerant admitted but a study of pressure and temperature charts taken under a variety of operating conditions indicates that the metering of the refrigerant into the evaporator does not correspond with the requirements. Consequently, uniform temperature throughout is not possible.

In other words, the capillary tube

Two-Temperature Hookup Employing High Side Float



is not a sufficiently sensitive metering device and as a result there is a loss of efficiency which shows up in far longer running time than that obtained with a high side float.

In considering the use of high side floats from the service engineer's point of view, there is a considerable field for service work in replacement high side floats, also in the substitution of high side floats in place of capillary tubes on packaged units.

Among a good number of questions from the floor, one very interesting one concerned the possibility of using a high side float on multiple hookups.

This has been done on a number of jobs with ice cream cabinet and

sweet water bath combinations and has worked out well. It could be done on dual home freezer and kitchen cabinet combinations.

The hookup (see Fig. 1) is as follows: the high side float connects to the warmer coil. The outlet of this coil is connected to the inlet of a constant pressure valve. The outlet of the constant pressure valve is connected to the inlet of the colder coil. The outlet of the colder coil is connected to an accumulator which is connected to the suction line.

The unit is then charged with refrigerant with the constant pressure valve set to remain open. Charging is continued until both coils are flooded. The constant pressure valve

is then set to maintain the desired pressure within the warmer coil.

After the unit begins to pull down, it is purged until the desired pressure is obtained in the coolest coil. When proper pressures are obtained, the operation follows this pattern:

If the warmer coil temperature rises it opens the constant pressure valve and dumps over into the colder coil and the gases go through to the accumulator and thence to the suction line. If under these conditions the suction pressure rises sufficiently, the unit starts up and runs until the pressure is lowered to the cut out point.

If the colder coil temperature increases, the unit starts up and brings it down. In either case, the refrigerant is pumped back, condensed, and passed to the high side float. From there it goes first to the warmer coil to establish equilibrium there, then the constant pressure valve opens and the balance of the refrigerant goes on to the colder coil to replace that which has been drawn from that coil. It works well, is relatively low in initial cost, and has a good running ratio.

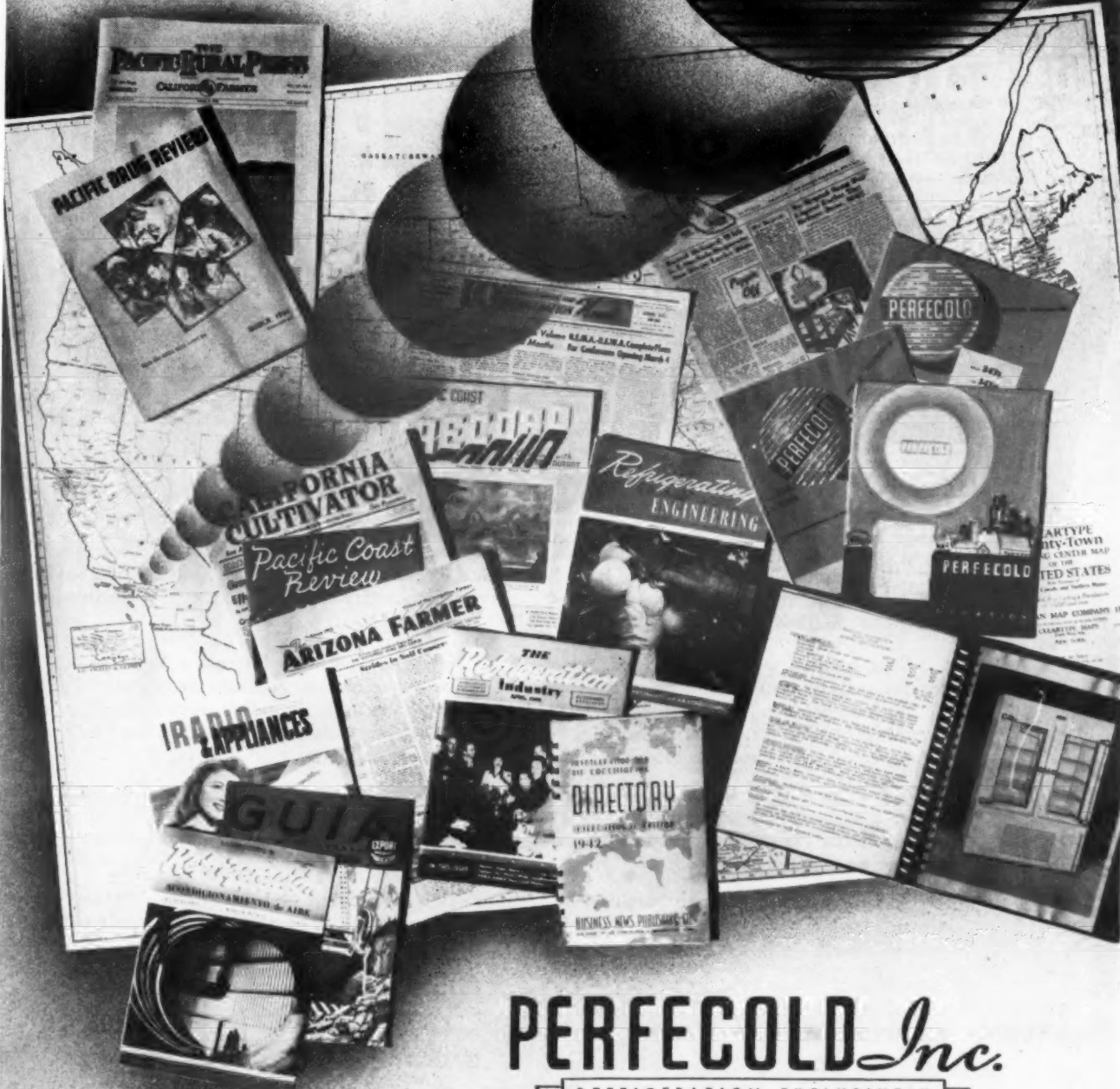
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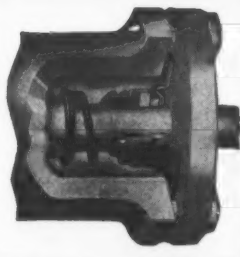
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*Talk given before Greensburg, Pa. chapter of the R.S.E.S.

Consumer Needs More Education on Role of Home Freezer Cabinet, Poll of 3 Cities Shows

WASHINGTON, D. C.—The general public's ignorance of frozen food storage cabinets for the home, the cost of the cabinets, and the lack of handy frozen food retail outlets were discovered to be the major obstacles to the sale of home freezers, it was disclosed in a survey of three cities by Seeley & Associates, business consultant firm here.

However, where the public was familiar with home freezers, the demand and potential demand were high, the survey showed.

Ronald C. Seeley, head of Seeley & Associates which is located at 725 Mills Bldg. here, and George James Seros, recently returned veteran and director, initiated their marketing research with a stratified poll on the Frozen Food Home Storage Cabinet because of its vast potentialities. They claim a record of less than 2% margin of error in polling since 1934.

The three cities chosen by Seeley & Associates for the survey were Detroit, with its key automotive industries and high wage level; Baltimore with its variety of commerce and medium wage level; and Washington, D. C., with its complete lack of industry and transient population.

In each city the same general questions were asked of people of all income levels, varied size families, and varied type homes.

The survey showed that approximately 30% of the people of these cities had never seen nor heard an

advertisement for frozen food cabinets. It also revealed that where the cabinets were best known, there was the greatest desire to own one.

Preference as to size of cabinet was shown to depend on the size of family, the size of income, and the size of the space available.

While Detroiters almost unanimously preferred to purchase their

home freezer, apartment dwellers in Washington and low income groups in Baltimore expressed strong desires to rent cabinets.

In Washington and Baltimore, it was discovered that only one person in eight now purchases more than five packages of frozen foods a week.

The report of the Seeley survey follows:

QUESTION 1: Are you familiar with frozen food home storage cabinets?

	Detroit	Washington	Baltimore
Yes	68.7%	70.5%	55%
No	20.0%	29.5%	30%
I think so	11.3%	.....	15%

DETROIT: Three out of every 10 persons interviewed in the metropolitan Detroit area had never heard or seen an advertisement for frozen food cabinets. Lack of sufficient advertising through radio and newspapers on this comparatively new item has been hampered during its early period by the war.

What little advertising was done has reached the various income groups in this proportion:

High Income Level	81.8%
Average Income Level	70.5%
Low Income Level	42.8%

Consequently the greater percentage of the population has no knowledge of the use and function of the frozen food industry and its support-

ing items.

WASHINGTON: Again, as in Detroit, three out of 10 persons interviewed had no knowledge of the frozen food cabinets. This no knowledge group was represented in the average income group by 28.1% and in the low income group by 47.1%. This comprises an advertising outlet to some 80,000 family heads in Washington, D. C.

BALTIMORE: Baltimore shows a high lack of advertising by the frozen food industry—represented by 45% who are not familiar or think they know about frozen food cabinets. This 45% is around the average income (40%) and the low income (77%) groups.

QUESTION II: If there were available to you, today, a frozen food home storage cabinet for use in storing fruits, vegetables, meat, and poultry, would you desire a frozen food home storage cabinet?

	Detroit	Washington	Baltimore
Yes	61.3%	49.2%	30.0%
No	28.7%	47.5%	48.3%
Undecided	10.0%	3.3%	21.7%

This question was further subdivided in Detroit and Baltimore as follows:

	High Income		Average Income		Low Income	
	Det.	Balt.	Det.	Balt.	Det.	Balt.
Yes	63.6%	75.0%	63.6%	31.4%	50.0%	7.0%
No	22.8%	.....	27.3%	47.5%	42.9%	.....
Undecided	13.6%	.....	9.1%	.....	7.1%	.....

DETROIT: It was necessary for the interviewers prior to asking this question to explain to 31.3% of those interviewed the use of a frozen food home storage cabinet.

The 61.3% who desire a cabinet are well represented among the top and average money groups comprising four-fifths of the population.

The "No" and "Undecided" among the high income group were influenced by:

"I don't think they are practical as yet."

"Further research is needed."

"Frozen food isn't available in quantity."

"Can't seem to get what I want in frozen food."

"I'll wait for future designs."

The Average Income groups made the following comments:

"I would like to see someone else's first."

"I'm afraid the cost would be too great."

"I would like to have one but my kitchen space is limited."

"Doesn't a refrigerator do the same job?"

Size of family is an important factor in determining desire for a cabinet and frozen foods.

There is a steady upward curve in relation to size of family:

No. of Children	Yes	No	Undecided
0	40.8%	50.0%	9.2%
1	58.9%	23.5%	17.6%
2	64.7%	23.5%	11.8%
3	83.3%	11.1%	5.6%
4 or more	80.0%	.....	20.0%

It was not only established that the larger the family the greater the desire but it was also noted that the larger the family the diminishing of a definite "no desire" regardless of the income.

The greatest number of families having four or more children were in the low income groups, consequently

the 20% undecided was due to financial reasons, in spite of their obvious desire for a cabinet, because of the economical reasons of storing farm products bought at wholesale.

Only 3% difference was noted between the sexes interviewed as to desire for a frozen food cabinet:

Men	59.4%
Women	62.5%

Of the 63.3% who expressed a desire for a cabinet—20% would purchase a cabinet today. This percentage represents 56,668 families. While 80% would prefer a refrigerator first and would then consider a cabinet depending upon the new refrigerator's freezing unit.

WASHINGTON: The desire for a cabinet is well represented among all income group levels. This desire is contingent on cost and size. It was very evident from the remarks expressed by the low income group level and a great many of those in the average income group that a cabinet would be very desirable except that price would keep it out of their reach.

Some 45% of the dwelling units in Washington, D. C., are apartments and since the majority of these are occupied by the average income group, this great percentage group were of the opinion that lockers, placed in the basement of their apartments, should be made available to them. The majority of apartments are small consequently there is the problem of kitchen space.

The desire for a cabinet by sex varied only 1% between male and female. This is in contrast to industrial cities where the foreign born population is greater and the male head of the family still makes the financial decisions.

Sex	Yes	No	Undecided
Male	50%	45%	5%
Female	49%	48%	3%

(Concluded on next page)

The Ansul Research Staff REPORTS ON:

SLUDGES

Approximately 90% of the sludges produced in refrigerating systems are due to moisture. The exact cause can always be determined by analysis, but the appearance of the sludge (see photos) is usually indicative of the cause.

SLUDGE DERIVED FROM MOISTURE—

If water is present in a machine, the nature of the sludge depends upon the type of refrigerant and length of time the water is present. All refrigerants... sulfur dioxide, methyl chloride, Carrene and "Freon-12"... react with water to produce corrosion products characteristic of each. To prevent sludge, the amount of water present in a refrigerating system must be small enough to avoid ice separation and corrosion. For "Freon-12" and methyl chloride, a quantity of water approximately .05% by weight will cause corrosion; the limit is somewhat higher for sulfur dioxide.

SLUDGE DERIVED FROM OILS—

Oil sludges are characterized by total or partial solubility in carbon tetrachloride, gasoline and similar solvents. It is generally presumed that oil sludges are due to two causes: (1) an interaction between the unsaturated constituents of the oil and the refrigerant; (2) a breakdown of the oil due to heat, oxidation, friction, etc.

ANSUL WHOLESALERS are ready and equipped to render an intelligent, co-operative service to refrigeration engineers and maintenance men on problems which arise from time-to-time in the operation of refrigerating systems.

FOR EXAMPLE:

Samples of ice machine oils, submitted by users of Ansul Refrigerants to Ansul Wholesalers, are tested by Ansul Laboratories without charge by the Ansul Standard Wax-Oil Separation Method. This approved method, developed and standardized especially for use in connection with oils used in refrigerating systems, provides an accurate determination of the amount of wax which separates from an oil at low temperatures.

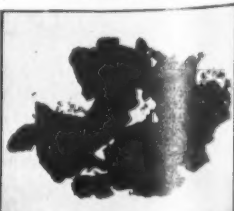
Ansul Refrigerants are available at leading wholesalers everywhere.



GRANULAR SLUDGE
... due to moisture



FLUID SLUDGE
... due to oil



HARD SLUDGE
... due to moisture and oil



SEND FOR
"SLUDGES"
by Ansul
Research Staff
A detailed analysis of the refrigeration sludge problem.



REG. U. S. PAT. OFF.

ANSUL CHEMICAL COMPANY
REFRIGERATION DIVISION, MARINETTE, WISCONSIN
DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22" AND "FREON-113"

YOUR SHARE OF PROFITS

Your share of profits can have a direct relation to your share of Kold-Hold refrigeration units. When using Kold-Hold Serpentine Plates you have a share in Kold-Hold savings. You have fresh standards of efficiency and economy for new products for an expectant market.

This assures you these advantages: Maximum prime surface; highest rate of plate heat acceptance obtainable with natural convection lowsides; minimum pressure drop; freedom from oil logging because the refrigerant circulates freely from inlet to outlet; no chance for short circuiting of the refrigerant; maximum K factor. Locker plant owners are finding the plate stand units especially adaptable to the standard depth freezer cabinets.

Conversion of out-dated cabinets and coolers gives you more space, better cooling and saves the high cost of new equipment. The Kold-Hold principle of refrigerant flow permits fabrication of Serpentine Plates into complete liners and shelves with all refrigerant joints eliminated and without interruption of flow.

Individual Kold-Hold Serpentine Plates, completely fabricated plate stands and cabinet liners are now being supplied to many manufacturers of ice cream cabinets, frozen food cabinets, milk coolers, and farm freezers.

WRITE FOR INFORMATION ON
SHARING IN KOLD-HOLD SAVINGS

KOLD-HOLD

KOLD-HOLD MANUFACTURING COMPANY 500 N. GRAND AVENUE, LANSING 4, MICHIGAN

Large Baltimore, Washington Consumer Groups Prefer To Rent Freezer Cabinets

(Concluded from preceding page)

Those who answered "No" or who were "Undecided" for desire of a cabinet were then asked by the interviewers if they would mind stating their reasons? It was interesting that the majority gave:

1. Cost.
2. Limited space.
3. Frozen foods not always available.
4. Not familiar with frozen foods.

BALTIMORE: There is a definite desire for a cabinet among the High

Income group diminishing through the Average Income to a low of 7% in the Low Income group.

However there is a large undecided percentage in both the Average Income group (17.2%) and the Low Income group (29.0%) which is based primarily on cost.

Of the total families interviewed 27% said that cost of the cabinet made it difficult to buy.

Of the 48.3% saying no to this question, 40% gave as their reason "high cost."

Of the 21.7% who were undecided, 40% gave the same reason for their decision.

Consequently there are some 67,000 families in Baltimore who have responded in the negative or are undecided as to a cabinet due to cost.

Lack of space was another factor, among row house dwellers with limited kitchen space, who are unable to find room for a cabinet.

The desire for a cabinet by size of family shows an upward desire curve in relation to size—with the exception of families having four or more children where a drop occurs. The majority of this category were in the low income group and finance was the obstacle.

However, in spite of money conditions, there is a 30% undecided group.

QUESTION III: What size cabinet would you prefer?

Size	Detroit	Washington	Baltimore
1 cu. ft.	20.8%	22.5%	40%
2 cu. ft.	35.2%	22.5%	35%
3 cu. ft.	44.0%	25.8%	15%
4 cu. ft.		9.9%	5%
5 cu. ft.		3.2%	
6 or larger		16.1%	5%

NOTE: The persons interviewed were told what each size cabinet holds.

DETROIT: This question was further broken down by:

Income:	1 cu. ft.	2 cu. ft.	3 cu. ft. or Larger
High	6.0%	44.9%	49.1%
Average ..	24.6%	35.7%	39.7%
Low	31.5%	18.5%	50.0%

QUESTION IV: Would you prefer rental or purchase of a frozen food home storage cabinet?

	Detroit	Washington	Baltimore
Rental	3.2%	25.8%	30%
Purchase	96.2%	74.2%	70%

DETROIT: The overwhelming preference to purchase rather than rent results from many factors as:

1. Large savings deposits.
2. Desire for possession.
3. Continued good salaries.
4. Inability to purchase household goods for the past five years.

This desire to purchase is reflected in all income group levels and only is the desire to rent shown in the low income group—14.6%.

This over estimates the possibilities of cold cash on the line but it does indicate a great potential area. The potential market is there and it is excellent, nevertheless, in competition with salesmen for stocks, radios, vacations, and the many other items that will be placed on the market—the most persuasive sales force and

the finest advertising will get the desired results.

WASHINGTON: Those preferring rental of a frozen food home storage cabinet were among the apartment house dwellers. They were also the great frozen food users.

BALTIMORE: The desire to rent at this time is reflected by 30% of the Baltimore families with 46% in the average income group and almost unanimous desire for rental in the low income group.

This is due to:

1. Insufficient knowledge of the cabinet through advertising and desire to try first.
2. High cost of cabinets in a city represented by 20% colored, a high percentage of mixed foreign population, and a not too well paid average income group.

QUESTION V: Approximately how many packages of frozen food do you consume per week? (Not asked in Detroit.)

	Washington	Baltimore
Over 10 packages	6.8%	1.7%
Between 5-10 packages	11.6%	11.7%
Between 1-5 packages	66.6%	58.3%
None	15.0%	28.3%

WASHINGTON: Since there is only fair advertising of frozen food and since the stores equipped to handle frozen foods are in the minority 15.0% of the families of Washington, D. C., have never tasted frozen food and 66.6% eat a very limited amount.

Following is a breakdown by income groups of frozen food use:

Packages Bought Per Week	High	Average	Low
Over 10	16.6%	3.3%	6%
5-10	25.0%	9.7%	6%
1-5	50.0%	70.9%	70%
None	8.4%	16.1%	18%

BALTIMORE: No comment.

All size units are well represented since size of cabinet is dependent on income, size of family, and type of home.

The high income group level prefers the 3 cu. ft. or larger cabinet to fit its entertainment program.

The average income group level shows no particular preference. Size variance is due to size of family and home.

The low income group prefers the 1 cu. ft. because of cost and the 3 cu. ft. for economy reasons; storing of farm butchered products.

WASHINGTON: Apartment house dwellers showed a preference for the 1 cu. ft. cabinet. The single and duplex dwellers among the high and average income groups showed a preference for the 3 cu. ft. cabinet and the low income group for the 1 and 2 cu. ft. cabinet.

Size of family was an important factor in determining size. Those with no children to two children showed a preference for the 1, 2, and 3 cu. ft. cabinets depending on their incomes, while those with three or more children showed a preference for the 4, 5, 6 cu. ft. and larger cabinets regardless of their incomes. A good rental market.

BALTIMORE: Housing space and income in the city of Baltimore brings a demand for the 1 and 2 cu. ft. cabinets with the 3 cu. ft. next in line.

Says GASKET JOE

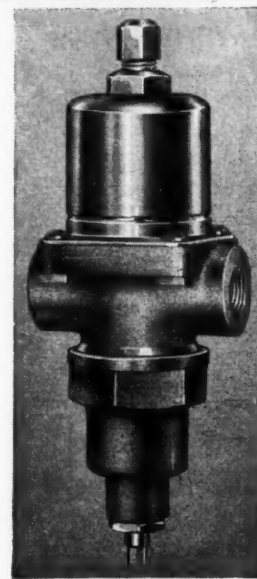
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Aminco No. 614 water valve regulates the amount of water passing through water-cooled condensers.

This valve is helping to keep systems in tip-top condition and because of its close control action it provides insurance of longer life for water-cooled condensers.

Sold, as always, through jobbing channels, it is an invaluable aid to the service-man concerned with keeping installations operating at full efficiency.

For more details see Bulletin No. 15.

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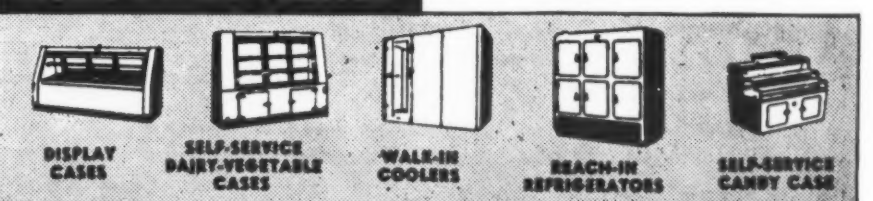
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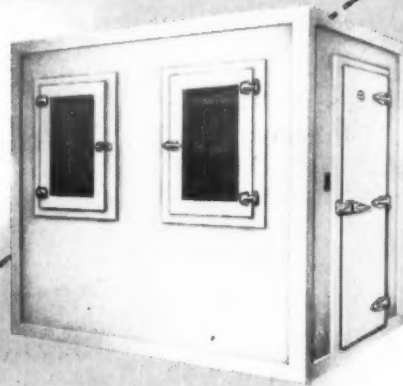
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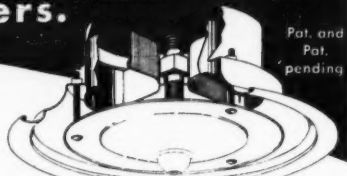
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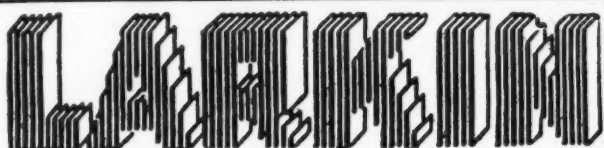
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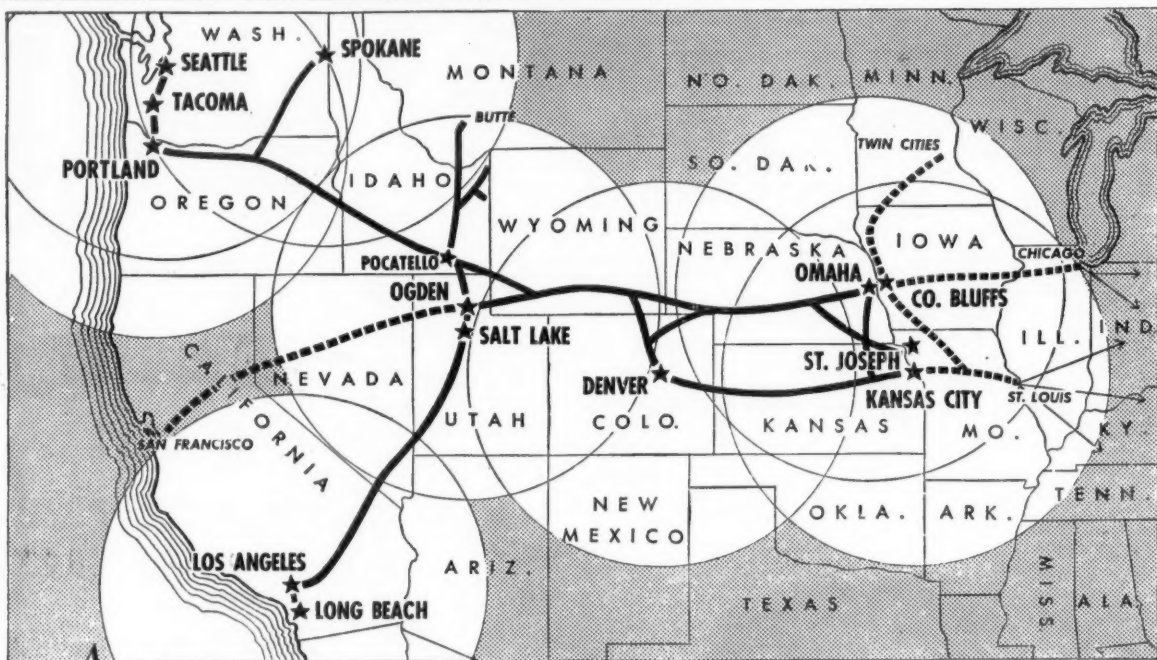
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Kansas City, Mo.-Kans.	Tacoma, Wash.
(Fairfax District)	Spokane, Wash.
Denver, Colo.	Los Angeles, Cal.
Salt Lake City, Utah	Long Beach, Cal.

As the map shows, all these cities are located

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The circles on the map indicate 500-mile distribution areas. In normal times, Union Pacific operates a fast, merchandise freight (L. C. L.) service within these short-haul areas, with door-to-door pick up and delivery service.

These industrial properties are improved and occupied by many diversified manufacturing and commercial enterprises.

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The Progressive

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The Strategic Middle Route

Walters of American Blower Says:—

Fans Near Top of Capacity Table Are Best for High Efficiency, Low Sound

By C. Dale Mericle

DETROIT—"Although fan capacity tables give no indication of the noise levels to be expected from any fan, one can be assured of obtaining a fan with maximum operating efficiency and minimum sound emission by making the selection near the top of any fan table," suggested Thomas A. Walters, head of American Blower Corp.'s research department, who addressed the recent meeting of the Detroit chapter, American Society of Heating & Ventilating Engineers.

Discussing "Fan Sound Levels and Selection," Mr. Walters described methods of measuring sound levels and showed by means of slides how performance curves of the four basic types of fans were related to noise emission.

The problem of reducing noise levels in fans is of comparatively recent origin and coincides with the development of air conditioning and the use of higher air pressures in ventilating systems, Mr. Walters said. "Years ago ventilating systems in the average office building, for example, were designed with large ducts characterized with low pressure drops. This permitted low air velocities and relatively low fan speeds, and sound emission from the fan was at a low level.

"But the advent of the modern building put a high price on space, and this limited the size of the

ventilating equipment, both the ducts and the machines," he continued. "This meant that soon the systems were forced to operate against 2 in. static pressure instead of 1/2 in. static pressure formerly encountered. High speed fans were thus required for the necessarily high air velocities, and speed does create more noise."

To bring sound emission to a minimum under these conditions, the designer has to select not only the best type of fan but the best size of fan, and an analysis is also required to determine the sound level which will be tolerated by the occupants, he declared.

Less Noise Demanded

"Fans are inherently noisy, however, and although considerable improvement has been made in lowering fan noise, continued improvement probably won't keep pace with the growing demand for reduced noise levels," admitted Mr. Walters.

"Acoustic treatment of ducts and rooms is something else again," he said, emphasizing that much can be done to reduce noise levels this way, although he himself has carried on little research as yet in this regard.

Turning to the problem of measuring the intensity of sound and testing fans for performance and sound emission, Mr. Walters briefly outlined the basic phenomenon of sound as waves transmitted through some medium such as air with rarefaction and compression of the medium.

Sound levels are measured in decibels, but sounds may also be measured in terms of physical units of magnitude, he said, with intensity or quantity of sound being denoted in watts per square centimeter, and the rate of the waves in frequencies.

Threshold of Audibility

The decibel (db) scale starts at 0 db, which represents the "threshold of audibility," according to Mr. Walters, who added that the mathematical determination of 0 db is 10^{-16}

watts/sq. cm. The scale runs to a high limit of 120 to 130 db, a point where the noise is physically uncomfortable for the human ear, and the sense becomes one of feeling more than hearing. A single decibel is defined as the smallest change in sound level which can be distinguished by the human ear.

The similarity between the decibel scale and that of a thermometer was pointed out by Mr. Walters, who declared that just as 68° to 70° F. may represent the normal temperature for comfort, 35 db to 45 db represents the normal noise level. Sound levels rated as low as 20 db would be classed as "silence." Incidentally, he remarked, extremely low sound levels are very depressing.

Human beings are also very sensitive to the frequency and pitch of sounds as well as their intensity, being most responsive to the frequency range of 800 to 1,200 cycles.

To measure sound, acoustimeters are employed. These, said Mr. Walters, consist essentially of a microphone to pick up the sound waves, connected to filters, amplifiers, and finally meters to register the intensity. These meters must cover a wide range of sound intensity and are customarily designed with three "networks" for low, medium, and high sound reception. Tolerance of the instruments is usually $2\frac{1}{2}$ db.

Readings at Seven Points

In making sound tests on fans, readings are taken at seven points equidistant from the fan, according to standards established by the National Association of Fan Manufacturers, explained Mr. Walters.

Performance and noise level curves for the four common types of fans were next outlined by Mr. Walters. These types are (1) propeller fan, (2) tubeaxial fan, (3) vaneaxial fan, and (4) the centrifugal fan.

The propeller fan, which consists of a propeller or disc type wheel

(Concluded on next page)

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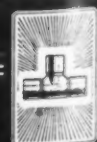
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Basic Laws of Fan Performance

In working with fans, regardless of type, the designer of an air conditioning system and the contractor would do well to refer to the basic laws governing fan performance, believes Thomas A. Walters, head of the research department of American Blower Corp. A new feature of the fan laws as used by this manufacturer is the factor for determining the change in the amount of noise (in decibels) emitted by the fan as the speed or size of a fan is varied. The fan laws follow:

1. **SPEED VARIATION** (Fan size, system, and gas density remain constant).
 - (a) Capacity of c.f.m. varies directly as speed ratio.
 - (b) Pressure varies directly as the square of the speed ratio.
 - (c) Horsepower varies directly as the cube of the speed ratio.
 - (d) $Db \text{ (change)} = 50 \times \log_{10} \text{ (speed ratio)}$.
2. **FAN SIZE VARIATION** (Pressure, density, and point of rating remain constant).
 - (a) Capacity and horsepower vary as the square of the wheel diameter.
 - (b) R.p.m. varies inversely as the wheel diameter.
 - (c) Tip speed remains constant.
 - (d) $Db \text{ (change)} = 20 \times \log_{10} \text{ (wheel diameter ratio)}$.
3. **DENSITY VARIATION** (Speed and fan size remain constant).
 - (a) Capacity of c.f.m. remains constant.
 - (b) Pressure varies directly as the gas density.
 - (c) Horsepower varies directly as the gas density.

Contractors Urged to Consult Fundamental Fan Laws In Making Proper Selection

(Concluded from preceding page)

within a mounting ring or plate is used for low pressure applications.

The tubeaxial fan consists of a propeller or disc type wheel mounted within a cylinder, and can operate at higher pressures than the propeller type fan.

Vaneaxial fans are similar to the tubeaxial fan in that they are mounted within a cylinder, but they also have air guide vanes before or after the wheel. This fan, said Mr. Walters, is an old type which has been much improved in the past four or five years.

Centrifugal fans, consisting of a fan rotor or wheel within a scroll type housing, have been highly developed for a good many years, he declared.

At this point, Mr. Walters urged designers and air conditioning contractors to refer more frequently to basic fan laws in preparing air conditioning and ventilating systems, because, he said, "we're all apt to forget at times the basic principles governing operation of fans."

To the basic fan laws, American Blower Corp. has added the change in noise emission (in decibels) which accompanies the change in either fan speed or fan size. These laws appear in the box accompanying this article.

With regard to selecting a fan to perform a particular job, Mr. Walters pointed out, as mentioned previously, that a fan selected from the top portion of the typical fan table, regardless of type of fan, will give the best operating efficiency and minimum sound emission.

"Where sound level is of no importance, and where first and not operating cost is important, and where space limitations must be considered, one may have to select a fan over a wider range of the fan tables," he admitted.

Fans, of course, are selected for their outlet velocity, and the pressure under which an air conditioning or ventilating system is to be operated is the determining factor in establishing the outlet velocity required.

"At higher pressures you must expect more noise, but it should also be remembered that low fan outlet velocity does not necessarily mean low noise emission," he cautioned. "There is frequently more noise when a fan is not operating at its peak efficiency."

Questioned as to the effect of dampers on fan noise, Mr. Walters pointed out that inlet vane dampers will have little influence on sound emission, but would probably cause a change in the characteristic horsepower curve of the fan.

Carrier Gets Contract To Install Cooling In 400 Florida Theaters

SYRACUSE, N. Y.—A \$2,000,000 contract involving the air conditioning of a statewide chain of 400 Florida movie theaters was announced here recently by Carrier Corp.

The agreement with the entertainment group calls for installation of air conditioning in 30 of the theaters before Jan. 1, 1947, with the rest to be equipped by the end of 1948. The deal is the largest in the history of theater air conditioning, Carrier officials believe.

Frank Rogers, president of a theater combine comprised of Florida Theaters, Inc., and Paramount Enterprises, Inc., said that any theaters added to the chain before Jan. 1, 1949, would also be air conditioned. Negotiations for the contract were

carried on by Mr. Rogers for the theater chain; Paul White of Belcher Industries, Inc., Carrier dealer in Miami; V. H. Keely, of Florida Weathermakers, Carrier dealer in Jacksonville; and A. E. Meling, Carrier district manager with offices in Atlanta, Ga.

Four concerns will make the actual installations. They are: Belcher Industries; Florida Weathermakers, Inc.; Falkners, Inc., Orlando Carrier dealer; and the Krauss Heating & Ventilating Co., Carrier's St. Petersburg representative.

Initial orders for condensing units, evaporative condensers, dehumidifiers, and other equipment needed for the first 30 theaters have already been placed with Carrier, the announcement said.

Trane Co. Names 3 To New Field Office Posts

LA CROSSE, Wis.—Three new appointments have recently been announced by the Trane Co., manufacturer of heating, cooling, and air conditioning equipment. R. W. Schulte, a veteran of 25 years' experience designing heating and air conditioning systems, has been placed in charge of Trane's new office at Oklahoma City, Okla.

F. R. Omohundro, with 22 years in the heating field, has been appointed to the staff of the firm's office in Salt Lake City, Utah, the announcement by the company headquarters here declared.

Engaged for the past four years in government work for the Navy in Houston, Texas, S. S. Webb has been named to assist Mr. Schulte as

sales engineer.

An engineer, Mr. Schulte worked with Albert Kahn Assoc., a Detroit architectural firm, from 1926 to 1931. Following that he practiced engineering here up until 1942, whereupon he became a mechanical engineer on government construction work. For part of this period Mr. Schulte also served as assistant chief mechanical engineer for Graham-Anderson, Probst & White, Chicago architects.

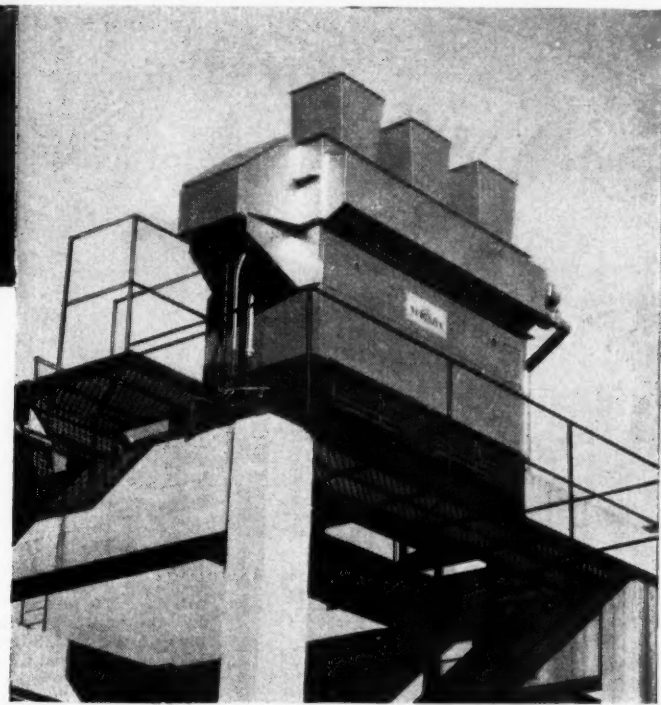
Mr. Omohundro's primary function in the Salt Lake City office, will be making trade and industrial contacts in his territory. A native of Colorado, he has been associated with various firms in the heating industry since his first post in Denver in 1924.

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PERMANENTLY INCREASES YOUR PRODUCTION CAPACITY!

Only the NIAGARA Aero CONDENSER has the "Duo-Pass" pre-cooling method that prevents scale deposits on condensing coils, assuring full capacity always—eliminating all the troubles caused by clogged-up, inefficient condensers.

The NIAGARA Aero CONDENSER, with coils that are always clean, uses the extra heat transfer of evaporation with outdoor air as the cooling medium to provide excess capacity, increasing your production in refrigerated products, effecting savings in power. The high cost of condensing water is also saved, quickly repaying the installation cost.



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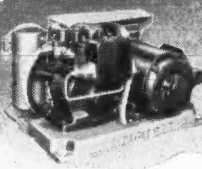
INDUSTRIAL COOLING
HEATING • DRYING

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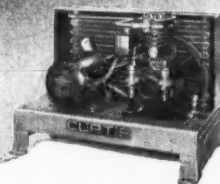
HUMIDIFYING • AIR
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Have You Ordered Your Copy of the 1946
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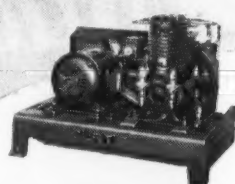
Universally Known for
Dependable,
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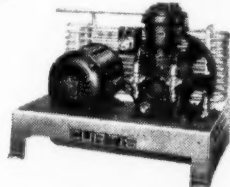
1/4 H.P. cabinet type



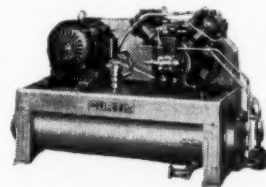
1 H.P. Air-Cooled



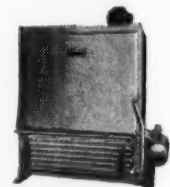
3 H.P. Air-Cooled



2 H.P. Water-Cooled (counterflow)



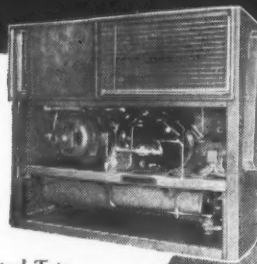
15 H.P. Water-Cooled Shell and Tube



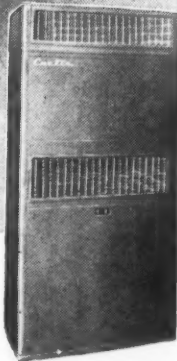
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Commercial Refrigeration and Air Conditioning Units



Central Type
Air-Conditioner



3 and 5-ton
Packaged
Air-Conditioner

In installations throughout the world, meeting the widest variety of requirements, Curtis equipment is well known for delivering satisfactory, trouble-free service throughout an exceptionally long machine life.

Curtis offers every user a complete line of Commercial Refrigeration Units—48 water-cooled condensing units (1/4 to 30 H. P.) and 45 air-cooled condensing units (1/4 to 3 H. P.). Curtis Packaged Air Conditioning Units needing only water and electrical connections to install, are made in 3 and 5-ton sizes and Curtis Remote Type Units in 7 1/2, 10, and 15-ton capacities.

Advanced engineering, precision manufacture, and high-quality construction are characteristic of every Curtis unit. Each reflects the wide experience of 92 years of successful manufacturing, plus wartime progress in research, development, and production.

Whatever your own requirements are, it will pay you to write for bulletins and information on the complete Curtis line.

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DURABLE **DEPENDABLE**

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ADVANCED ENGINEERING

"GUTS" . . .
Perlick brass fittings "have what it takes" to stand up longer and serve better. Engineered with an eye toward practicality, you'll find Perlick fittings just right for your many needs. Meet the entire Perlick fitting line—write for illustrated catalog today.

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- 1. SAVES SPACE.**
Installed in mid-ceiling occupies a minimum of overhead space.
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Even discharge in all directions assures uniform temperature throughout the refrigerator.
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High relative humidity.
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All copper coil.
Ball-bearing motor, totally enclosed.
REQUIRES NO OILING.
Built-in Heat Exchanger.
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Bottom pan easily removable for free access to all parts.
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Two-tone crackle finish.
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AND HEAT EXCHANGERS FOR
REFRIGERATION

Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



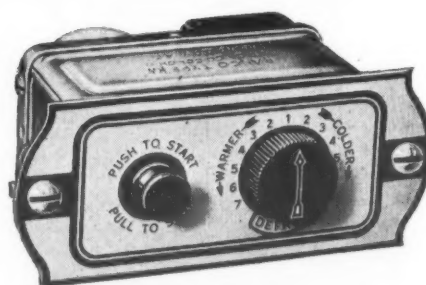
Manager, Refrigeration
and Air Conditioning
Division, Perfex Corp.

Service Chart For System Using Thermostatic Expansion Valve & Pressure Control

Symptoms	Possible Causes	Remedy
CONDENSING UNIT RUNS CONTINUOUSLY.		
Evaporator frosted or fully active but not cold enough.	Expansion valve passing too much refrigerant; liquid evaporating in suction line.	Readjust valve.
	Valve adjusted for too little superheat.	
	Feeler bulb not in good thermal contact with outlet.	See that bulb is tightly clamped to suction line.
	Feeler bulb exposed to warm room air.	Insulate bulb from room air.
	Expansion valve "sticky" due perhaps to ice holding valve too wide open.	Clean or replace valve and put fresh dehydrator in liquid line.
	Moisture frozen in body bellow holding needle too wide open.	Wash out bellows with alcohol and put therein a teaspoonful of glycerine.
	Expansion valve too large or of wrong type.	Replace with valve of proper size or type.
Evaporator frosted or fully active. Refrigerator temperature normal to cold. Suction line cool. Suction and discharge pressures low.	Pressure control switch stuck; contacts welded shut.	Repair or replace switch contacts or entire control.
	Pressure control set too low.	Reset cut-out higher.
Evaporator may or may not be frosted or fully active. Refrigerator temperature normal to high. Suction and discharge pressures high.	Refrigeration equipment overloaded. Heat load greater than refrigerating capacity.	Reduce heat load or increase capacity of, or replace refrigerating equipment.
	Air or water to condenser too warm.	Provide plenty of cool air or water.
	Condenser and/or fan too small.	Replace either or both as necessary.
Evaporator may or may not be frosted or fully active. Suction line warm. Refrigerator temperature normal or high. Suction pressure high; discharge pressure low.	Suction valves in compressor leaking, or pistons and rings very badly worn.	Replace suction valves or rework the compressor.
	Belt slipping.	Tighten belt to proper tension.
	Motor running too slowly.	Get rated voltage to motor terminals.
	Discharge valves in compressor leaking back.	Replace valves and relap plate.

RANCO REFRIGERATION CONTROLS

Perfection thru Precision



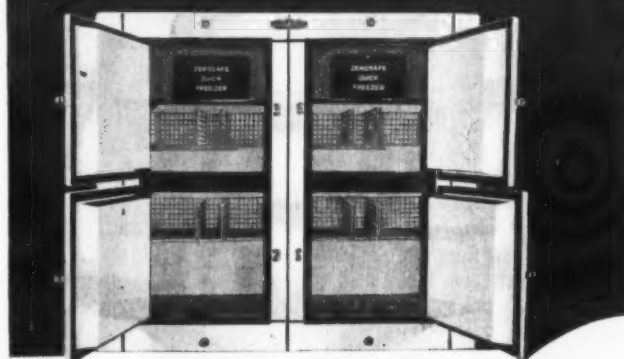
Type KWS, General Replacement
Rancostat, in stainless steel case.

Precision checks on each individual part of the sturdily built Ranco controls assure accurate and rugged service, long life and economical operation. There is a Ranco Control for practically every commercial and domestic refrigeration requirement.

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WILSON ZEROSAFE FARM FREEZER
Sectional Model FF-60

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SINCE 1939 Wilson ZEROSAFE has been the greatest reach-in farm freezer in America... THE NEW WILSON ZEROSAFE IS NOW GREATER THAN EVER BEFORE... Not a toy, but big, ruggedly beautiful, efficient, with stamina for years of low-cost operation.

SIZES FOR EVERY NEED
FROM 15 TO 120 CU. FT.

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Planning All-Industry Exhibition



At left is K. B. Thorn-dike, chairman of the committee planning the Fourth All-Industry Refrigeration and Air Conditioning Show, pictured going over some of the details with H. F. Spoehrer, R.E.M.A. president. The show will be held in Cleveland Oct. 29 to Nov. 1.

Show Plans--

(Concluded from Page 1, Column 3)

The Electromatic Division of The Simoniz Co., Fedders-Quigan Corp., Food Locker Equipment Co., Frigidaire Division of General Motors Corp., Frosted Food Field, Inc., General Controls Co., General Electric Co., L. H. Gilmer Co., Division of U. S. Rubber Co., Griffith Laboratories, Heat-X-Changer Co., Inc., Henry Valve Co., Ideal Cooler Corp., The Imperial Brass Mfg. Co., Jamison Cold Storage Door Co., Jarrow Products, Kerotest Mfg. Co., Kinetic Chemicals, Inc.

Kold-Hold Mfg. Co., Kramer Trenton Co., Lehigh Foundries, Inc., Lily-Tulip Cup Corp., Lindley Box & Paper Co., Locker Publications Co., Lynch Mfg. Corp., A. E. Macadam &

Co., Inc., Marathon Corp., Marlo Coil Co., Master Bilt Refrigeration Mfg. Co., Master Mfg. Corp., Mayflower Products, Inc., McIntire Connector Co., McQuay, Inc., Midwest Metal Stamping Co., Mills Industries, Inc., Minneapolis-Honeywell Regulator Co., C. F. Mohr Associates, Mueller Brass Co.

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Servel, Inc., Sporlan Valve Co., Standard Refrigeration Co., The Stangard-Dickerson Corp., Superior Valve & Fittings Co., Tecumseh Products Co., Temprite Products Corp., Thermal Co., Inc., Tyler Fixture Corp.

United Cork Companies, United Refrigerator Mfg. Co., Universal Cooler Division of International Detrola Corp., Virginia Smelting Co., The Weatherhead Co., Western Fixture & Equipment Co., Westinghouse Electric Corp., White-Rodgers Electric Co., Wolverine Tube Division, York Corp.

Army Food--

(Concluded from Page 1, Column 2) review the whole experience of the past war, with emphasis on its omissions.

While the American soldier was known as the best fed of all armies there was no question of the fact that he had in places lived for long periods on the "B" ration and other diets composing no perishable foods, which medical authorities have pronounced essential to an efficient fighting army.

About 70 officers of all ranks with experience in all theaters of operations were called in for a series of meetings culminating April 27-31, when the refrigeration committee made an exhaustive report, parts of which may be published.

Among the active participants called back from civil life were David L. Fiske and George D. Wetherbee. Colonel James C. Longino was general chairman.



..... before it becomes dangerous!

VISOLEAK detects even the smallest leaks before they cause damage to expensive refrigeration systems. Years of use prove it safe, economical, easy to use.

NEW CHARGING SET

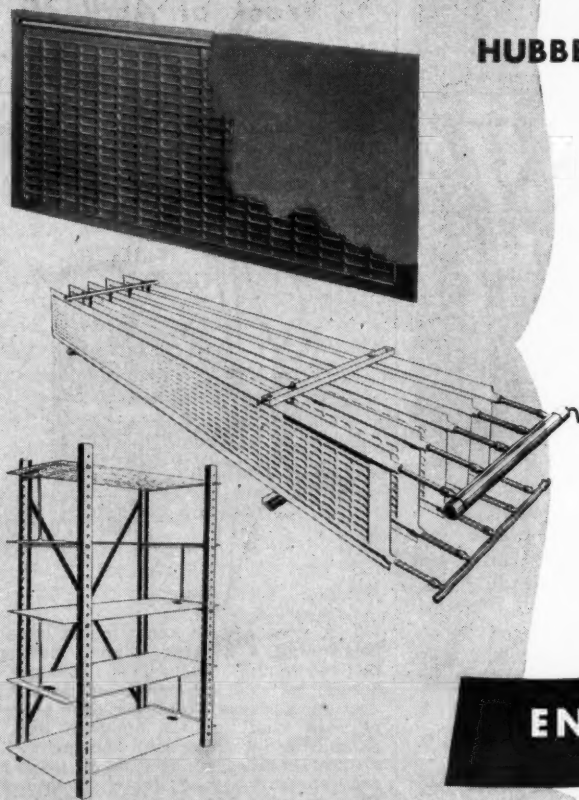
The VISOLEAK Charging Set was developed to inject VISOLEAK, add refrigerant oil or re-charge sealed units. For use on all types of refrigeration systems without danger of introducing air or foreign matter.

Charging Set—complete with hoses \$7.50
Filler only—without hoses 6.00
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NEVER MIND HOW GOOD YOU USED TO BE—HOW GOOD ARE YOU NOW?



HUBBELL-YODER full flooded plate refrigeration meets the challenge of this atomic age

FROM a purely technical angle, it's the fastest temperature pull-down you ever saw.

More specifically, it's the system of mechanical refrigeration which circulates the refrigerant through a network of ducts criss-cross each other in all directions thus literally "flooding" the length and width of the interior of the plate with a web of refrigerating element. Every square inch of the entire area of a Hubbell-Yoder Full Flooded Plate is prime pick-up surface.

This is refrigeration performance geared to the stepped up standards of this new era. There is no point in comparing its efficiency with prewar refrigeration practice because there just isn't any comparison. Low temperature equipment such as freezer cabinets, locker plant plate banks, sharp freeze shelf stacks, fruit and vegetable counters, etc., whose refrigeration units bear the Hubbell-Yoder trade mark is simply in a class by itself. If you make, sell or use such products it will pay you to get the clear facts about these sensational plates. Write, wire or phone.



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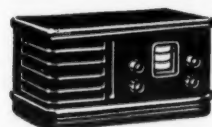
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Today, the industries indicated by the above illustrations are being served by Hupp. In the economic war for profitable peace-time markets now under way, the only method that will again assure maximum production and full profits is contract manufacturing. That this truth is still recognized by firms regardless of size is shown from the following size

analysis of Hupp's present customers:

CLASS SIZE	% TOTAL NUMBER	TOTAL ASSETS OF CUSTOMER (Based on latest published reports)
A	26%	Over \$50,000,000
B	18%	\$25,000,000 to \$50,000,000
C	21%	\$5,000,000 to \$25,000,000
D	35%	Under \$5,000,000
Total Customers	100%	

Thus, to gain more sales and an increased amount of profits, industry large and small continues to make use of the benefits of contract manufacturing.

Hupp, with plants in Detroit and Cleveland, is currently producing, on a contract basis, machined parts, stampings, rolling, welding, painting; making sub-assemblies and

complete assemblies, all by high production efficient cost methods.

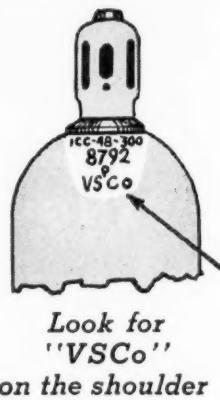
For help in applying contract manufacturing to your business CALL HUPP—AN EXPERIENCED CONTRACT MANUFACTURER.



ONE IN A SERIES OF ADVERTISEMENTS PRESENTING THE HUPP PLAN FOR INDUSTRIAL STABILITY

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If cylinders could sing, a hit tune in their repertoire would be "Carry Me Back to Old Virginia." It's a mighty empty feeling to be a long, long way from home, with nothing to do—but there's plenty of work waiting for VIRGINIA Refrigerant cylinders; so have a heart, Mister. If there's an empty, homesick cylinder around your place, have a look on the shoulder.... If you find "VSCo" stamped there, please start it on its way back to VIRGINIA, home of EXTRA DRY ESOTOO (Liquid Sulfur Dioxide) and V-METH-L (Methyl Chloride)



Look for "VSCo" on the shoulder

Distributors of "Freon" Refrigerants
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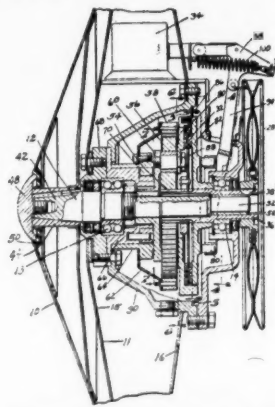
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PATENTS

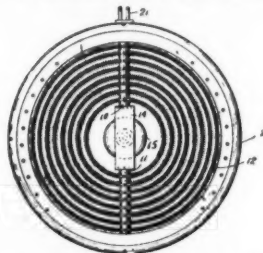
Week of April 30

2,399,319. WASHING MACHINE TRANS-MISSION AND SUPPORT. Myron W. Bowen, Niles, Mich., and Everett E. Burnett, Chicago, Ill., assignors to Bendix Home Appliances, Inc., South Bend, Ind., a corporation of Delaware. Application May 11, 1944, Serial No. 535,150. 5 Claims. (Cl. 74-291.)



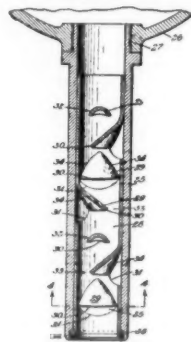
1. A transmission and support assembly comprising, a housing, a shaft having an end extending from said housing and serving as a load support and output connection, a sleeve extending over a portion of said shaft at its opposite end and extending out from said housing to form an input drive connection, a gear train for connecting said sleeve to said shaft thereby affording a gear reduction between said sleeve and shaft, gear teeth cut on said sleeve for driving said gear train, a clutch for selectively connecting said shaft and sleeve directly, and an element of said clutch retained for rotation with said sleeve by contact with said gear teeth but slidable axially of said sleeve on said gear teeth.

2,399,357. HEAT EXCHANGER. Charles H. Koper, Needham, Mass., assignor to B. F. Sturtevant Co., Hyde Park, Boston, Mass. Application Oct. 16, 1943, Serial No. 506,539. 2 Claims. (Cl. 257-124.)



2. In a heat exchange unit, a plurality of concentric circular coils formed from circular hollow tubes, and a pair of aligned circular headers extending diametrically across said coils, said tubes at one side of the center of said unit being located on one side of one of said headers and connecting therewith at said one side thereof, and at the other side of the center of said unit being located on the opposite side of the other of said headers and connecting therewith at said opposite side thereof.

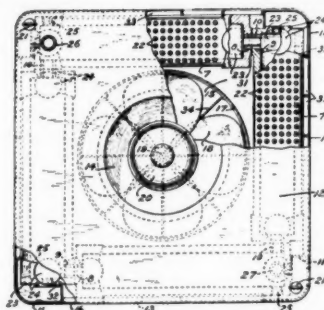
2,399,384. VENTILATING APPARATUS. William C. Pross, Bainbridge, N. Y., assignor to Bendix Aviation Corp., South Bend, Ind., a corporation of Delaware.



Application March 19, 1942, Serial No. 435,255. 8 Claims. (Cl. 98-1.)

1. In apparatus of the class described, a tubular casing, a tube slidably inserted in said casing, said tube having axially-spaced, angularly-spaced wall portions pressed inwardly to form baffles in said tube, the outer or lower edge of each of said baffles being formed by cutting the wall of the tube and each baffle extending across the longitudinal center line of said tube, the number of said baffles being sufficient to prevent any direct longitudinal flow of air through said tube and casing, and means for securing said tube in said casing.

2,399,487. UNIT HEATER. Walter J. Hartwig, Wausau, Wis., assignor to D. J. Murray Mfg. Co., Wausau, Wis., a corporation of Wisconsin. Application June 19, 1943, Serial No. 491,455. 2 Claims. (Cl. 257-137.)



1. A heating assemblage comprising, an endless series of elongated similar heat transfer sections each having a set of bosses at each of its opposite ends, each set of said bosses consisting of one boss the central axis of which is disposed longitudinally of the section and a pair of other bosses the common axis of which is disposed transversely of the section, conduit means connecting one longitudinal boss of each section with a transverse boss of an adjoining section, a corner bracket having notches resiliently frictionally engaging two of the bosses at one end of each section, an elongated grille extending along each section and spanning the space between the adjacent brackets, enclosing plates coacting with the opposite sides of all of said grilles and brackets to provide a confining casing for the series having an outlet extending transversely of the latter, and means for circulating air through said grilles and over said heat transfer sections and out of said outlet.

AVAILABLE FOR LICENSING OR SALE

Pat. 2,245,300. ROTARY REFRIGERATED LOCKER SYSTEM. Patented June 10, 1941. A series of food lockers on a crank-operated turn table encircle a refrigerating coil, the whole being enclosed and insulated from a heated room wherein a patron may comfortably bring a drawer-like locker into registration with a small door providing the only access to the lockers. This arrangement has dual purpose of eliminating necessity of entering refrigerated space (protecting the patron's health) and reducing the loss of cold air to a minimum. Identifying means for lockers may be seen through glass section of door. (Owner) William J. Rutan, Hawarden, Iowa. Groups 20-31; 25-41. Reg. No. 2,652.

Pat. 2,247,017. ICE FREEZING MOLD AND TRAY THEREFOR. Patented June 24, 1941. Reg. No. 2,668.

Pat. 2,247,018. ICE FREEZING MOLD. Patented June 24, 1941. Reg. No. 2,669.

Pat. 2,247,019. INDIVIDUAL ICE MOLD. Patented June 24, 1941. Reg. No. 2,670.

The three patents listed above relate to individual tubular molds for household refrigerators. Ice or other congealed substance may be readily removed from molds (the slight heat of the hand being sufficient). Molds may be nested in a horizontal position on a suitable frame (Pat. No. 2,247,017) or a number of them may be separately mounted on the same tray in a vertical position with opening at the top (Pat. 2,247,018) or at the bottom (Pat. 2,247,019). Construction is of moulded plastic or light stamped sheet metal. (Owner) Frank L. Sessions, 1527 Rockefeller Bldg., Cleveland 13, Ohio. Groups 33-73; 35-84; 39-81.

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PAYMENT in advance is required for advertising in this column.

POSITIONS WANTED

FACTORY REPRESENTATIVE or Sales Engineer 20 years experience in refrigeration and air conditioning, engineering, teaching, and wholesale selling. Well acquainted with jobbers, distributors, and manufacturers throughout middlewest. Wants permanent position with reputable firm working out of St. Louis, Mo. Box 1985, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

YOUNG MAN with knowledge of refrigeration required for export sales department with leading exporter of air conditioning equipment. Knowledge languages and export business desirable but not essential. 5 day week. Apply 4th floor, 89 Broad St., New York 4, N. Y.

REFRIGERATION ENGINEERS wanted by Midwest manufacturer of refrigeration control devices. Mechanical engineering graduates preferred. Expansion of facilities has provided openings in design and laboratory development. Ample opportunity for men of ability. Write describing training and past experience. Box 1976, Air Conditioning & Refrigeration News.

FACTORY PRODUCTION man on coolers, display cases, specialty items. Small factory employing 15, located Central North U. S. Must be able to handle complete production, designing, purchasing, employment. Must have complete over-all small plant experience with proven record. Real thing for right man. Give full qualifications and wages requested. Box 1987, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

NEW OR USED, two "Freon" compressors of 25 to 35 tons capacity at 5° F. suction pressure, or ammonia equipment of comparable size. Also interested in 50 to 70 ton shell and tube brine coolers and shell and tube condensers. U. S. THERMO CONTROL CO., 44 S. 12th, Minneapolis 4, Minn., Bridgeport 2167.

EQUIPMENT FOR SALE

REACH-IN TYPE Freezers. Polished stainless steel finish throughout. 20, 35, 75 cu. ft. capacity. Streamlined-Selfcontain with units. Electric water coolers, beverage coolers, refrigerators remote and selfcontain. Walk-in coolers, ice cream cabinets, condensing units, blower coils, water tanks. Prompt delivery. AMERICAN COMMERCIAL EQUIPMENT CO., 4150 Holly Knoll, Los Angeles, Calif.

FOR SALE: 10,000 new aluminum ice cube trays in three popular sizes. Also air-cooled and water-cooled remanufactured condensing units $\frac{1}{4}$ up to 2 h.p. Write for particulars. EDISON COILING CORP., 310 E. 149th St., Bronx 61, N. Y.

BEVERAGE COOLERS: 6 ft. capacity 22 cases; 8 ft. capacity 30 cases. These are dry coolers with heavy duty coils and equipped with continuous operating fan motor. Both models have stainless steel doors and trim. Immediate delivery. GENERAL REFRIGERATORS CORP., 678 Broadway, New York 12, N. Y., STuyvesant 9-1222.

NEW DIAL THERMOMETERS with $\frac{3}{16}$ in. copper lead tube 2 ft. long, $\frac{1}{8}$ in. Thermocouple 10 in. long range: -20° to 120° F. Special close-out price \$6.85 each. F. O. B. LELAND CO., Box 1366, Spokane, Wash.

HUMIDIFYING SYSTEM manufactured by the J. O. Ross Engineering Corp., New York. 250,000 ft. capacity, all automatically controlled. General Electric (D.C.) equipment, Powers Instruments. Good condition. Sell at sacrifice. PACE PRESS, INC., 636 11th Ave., New York 19, N. Y.

ONE 30-hp. YORK DUPLEX condensing unit. Mounted on cast iron base with single 30-ton condenser and two compressor units, R448F and L448F, on Shop No. 67502, complete with belts, drive pulley, and water valves, but less motor. In excellent condition. REFRIGERATION SERVICE SHOP, INC., 66 Stratford Ave., Dayton 2, Ohio.

SEALED WESTINGHOUSE units with shorted, leaky, or grounded terminals can be repaired by using our replacement terminals. Set of three \$2.85 (Part No. 1030). Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

SEALED CROSLLEY units with leaky terminals can be repaired by you in a few minutes without opening the compressor. Set of three outside replacement terminals \$6.75 (Part No. 1020). Installation tool \$1.65. Fits all Crosley "F-12" units. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

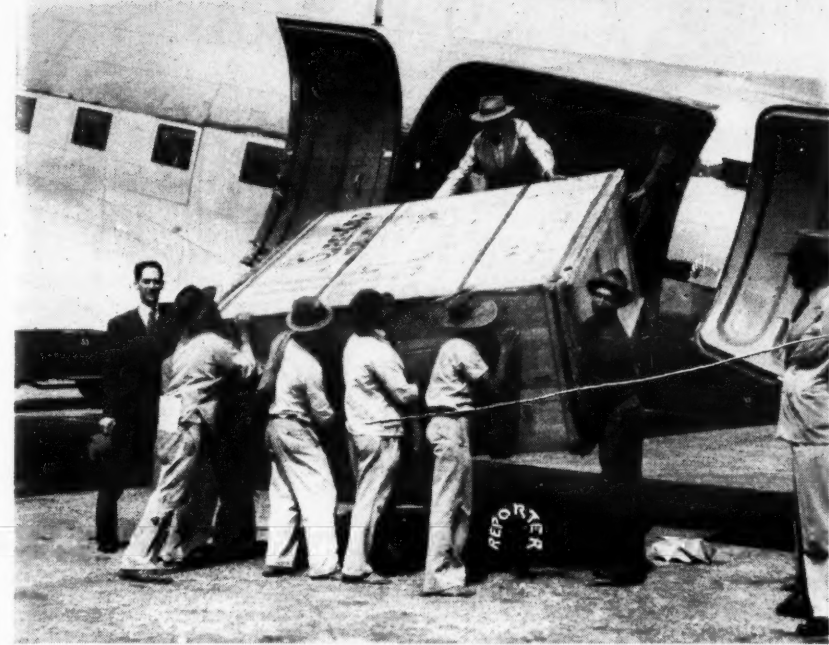
FRANCHISES WANTED

DISTRIBUTORSHIPS WANTED by a live wire sales organization for St. Louis and surrounding territory on commercial and domestic refrigeration equipment. We are located in the central part of St. Louis in a new building with large display rooms. Box 1988, Air Conditioning & Refrigeration News.



Believe It or Not

Reach-ins Shipped by Plane



LOS ANGELES—To overcome the slowness of rail and motor transportation from Cali to Medellin, Colombia, freight planes are being used by The Super-Cold Corp. distributor in that South American country to ship refrigerators as large as 52 cu. ft., according to a report from Albert Rebel, manager of Super-Cold's International Division.

"It seems pretty near unbelievable," Mr. Rebel wrote from Cali about the distributor, Messrs. Felix de Bedout e Hijos, "but they do have a method of getting the refrigerators in the ramp of the large freight plane. . . .

"Believe it or not, the cost of fly-

ing a 52 reach-in refrigerator from Cali to Medellin is 60 bolivars (approximately U. S. \$36). This is much cheaper than trucking them in. Flying time, 1½ hours; truck time, 3 days."

It was pointed out that although the Pacific port of Buenaventura is connected with Cali by a modern highway and railway system, ground transportation from Cali to Medellin and Bogota is slowed down by the narrow gauge railway and winding mountain roads. However, TACA and local Colombian airlines have established regular freight service from Cali inland, transporting a great variety of merchandise, it was explained.

interest of protecting their own economies, will not be able to permit unlicensed importations unless America is willing to become a lender nation. History shows that the most prosperous states of the world have always been the lender nations."

However, whether or not Congress approves the British loan, which he said would produce "constructive competition," Mr. DeLind sees England continuing as America's strongest postwar competitor for all world markets, as well as its largest customer. He noted that the Empire constitutes approximately 33% of the world's markets, 35% of the landed area of the world, and 38% of the world's population, "a strength that undoubtedly will be evident in centers of commerce everywhere."

"If America is to get its portion of world commerce," he said, "we must make arrangements to sell into the British market as well as other markets of the world."

Mr. DeLind emphasized that "it is important for America to get the extra 10% of business which exports normally provide" because business cycles in other parts of the world "have not followed the extreme curves of those in the United States since the turn of the century."

"It is this extra percentage that provides American citizens insurance of extra dollars. America, therefore, needs its share of this big market."

"What is good for American business is also good for labor and for America. When we sell goods abroad, every individual in this country, either directly or indirectly, benefits."

The first and foremost market for American goods, in Mr. DeLind's

opinion, will be found among the 20 Western Hemisphere countries "south of the border." Next in line potentially, he thinks, are South Africa, the countries bordering the Mediterranean, and the Far East.

Stressing the necessity of importing as well as exporting, Mr. DeLind advised that "If we sell, we must buy the other fellow's products in order to provide a necessary exchange of goods."

Chamber Again Sponsor Of Foreign Trade Week

WASHINGTON, D. C. — "World trade puts men to work" will be the theme of the eleventh annual "National Foreign Trade Week" May 19-25 to be sponsored by the Chamber of Commerce of the United States.

Announced purpose of the event is "to stimulate the public in developing an informed opinion on world trade as a factor in the American economy." In issuing its invitation to local communities to participate in the observance, the Chamber said that "far-reaching actions are now ahead to establish our country's position in foreign trade and to make our national foreign commercial policies effective."

"Trade agreements are to be negotiated by the United States with at least 14 countries under extension of the Trade Agreement Act; an International Conference on Trade and Employment will be held later in the year; and Congress will consider legislation affecting our commercial relations with the rest of the world."

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Greatest Export Business in History Predicted by DeLind for America If--

CHICAGO—If the proposed British loan now before Congress goes through and business is unhampered by Government policies, America can expect the greatest export business in its history in the first full production year.

So predicts John DeLind, Jr., newly appointed president of Borg-Warner International.

But he does not share the view of some that U. S. exports will hit \$14 billion in that first year. Mr. DeLind estimates a total of approximately \$7 billion, a figure he describes as "far and away better than any year in history, and more than

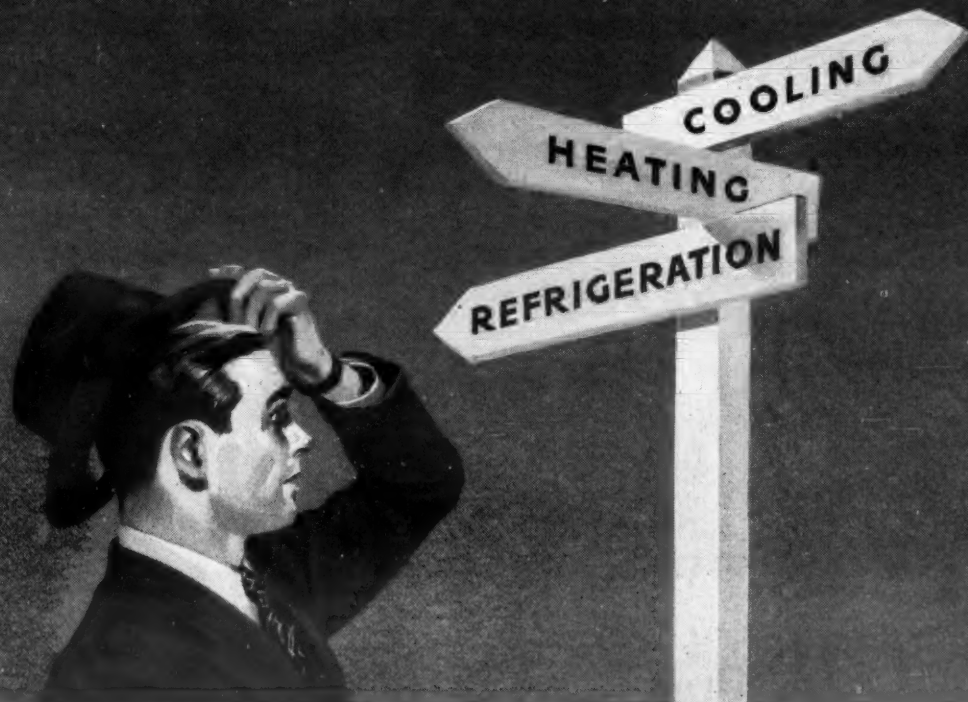
twice the best yearly total in the past decade."

"This tremendous potential," he explained, "is evident to analysts of foreign markets. It is well known that scarcities have piled up everywhere throughout the world, a natural result of the long war."

"There is a universal need among all nations for the other fellow's goods and America is in a good position to obtain its share of the world markets when international commerce is again operating in full swing."

But, Mr. DeLind pointed out, "Governments of the world, in the

CHRYSLER AIRTEMP



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All roads lead to greater dealer profits with Chrysler Airtemp. Dealers can choose one, two or all three Chrysler Airtemp lines of products—automatic central home heating, "Packaged" Air Conditioners, and commercial and industrial refrigeration.

The Chrysler Airtemp heating line—the most complete and advanced on the market—includes gas, oil and coal-fired furnaces and boilers; heating and cooling combinations; domestic stokers, conversion oil burners and water heaters. The famous "Packaged" Air Conditioners, pioneered by Chrysler Airtemp, bring simplified air conditioning to business, industry and homes. In refrigeration, Chrysler Airtemp produces the answer to every commercial and industrial requirement with its line of condensing units from 1/4 to 75 h. p.

Behind each product is the world-famed

engineering skill and mass production experience of Chrysler Corporation.

For year 'round profits, you can't beat this three-fold opportunity! Airtemp Division of Chrysler Corp., Dayton 1, Ohio. In Canada—Therm-O-Rite Products, Limited, Toronto.



1, 2, or all 3

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Text of Amendment to MPR 591 Altering OPA Compressor, Condensing Unit Prices

OFFICE OF PRICE ADMINISTRATION
(Document No. 54479)
COMPRESSORS AND
CONDENSING UNITS

[MPR 591, Amdt. 11 to Order 11]
MODIFICATION OF MAXIMUM PRICES

Order 1 under section 22 of Maximum Price Regulation No. 591 is amended by the addition of the following section:

SEC. 2.2 Modification of maximum prices for compressors and condensing units 5 hp. or less in capacity—and repair and service parts therefor—(a) Scope of this section. This section establishes maximum prices for the sales by manufacturers and resellers of compressors and condensing units with a capacity of 5 horsepower or less and repair and service parts for such compressors and condensing units.

(b) Manufacturers' maximum prices. The maximum price of a manufacturer for his sale to any class of his purchasers of any commodity covered by this section 2.2 shall be determined by increasing his base date maximum price in effect to such class of purchasers by 17 per cent.

For the purpose of this section, a "base date maximum price" is the manufacturer's maximum price properly established under Maximum Price Regulation No. 188 or Maximum Price Regulation No. 591 prior to May 9, 1946. It shall not include an adjusted maximum price, increased by OPA in response to an application for individual price relief.

(c) Optional use of this section. The maximum prices established by this section shall not operate to decrease any price established for a manufacturer by an individual price adjustment under Maximum Price Regulation No. 188 or Maximum Price Regulation No. 591 or any supplementary orders issued by this Office.

(d) Resellers' maximum prices. The maximum price for sales by any reseller of the types of compressors and condensing units and repair or service parts therefor covered by this section shall be his maximum price to each class of purchaser in effect on May 8, 1946, except that on any item for which his acquisition cost is increased as a result of the increase permitted manufacturers under this section, his maximum price for such item shall be his maximum price in effect to each class of purchaser on May 8, 1946, plus the actual dollars-and-cents increase in his current acquisition cost resulting from the increase put into effect by his supplier pursuant to the provisions of this section.

For the purpose of this section, the term "reseller" shall not include a person who purchases a commodity covered by this section for incorporation into or assembly with another product (such as refrigerator) with which it is customarily sold as a single unit at a single price.

(e) Notification. On sales of any commodity covered by this section to a customer purchasing for resale, any seller subject to this section shall give notice, in writing, at or before the issuance of the first invoice after May 9, 1946, of the

actual dollars-and-cents increase for each size compressor and condensing unit and repair or service part therefor over his maximum price to that class of purchaser in effect on May 8, 1946, and the method by which such customer is authorized to determine his maximum price pursuant to the provisions of this section.

(f) Reporting provisions; manufacturers. Any manufacturer who increases his maximum price as permitted under this section shall within 5 days after such a maximum price has been increased submit to the Prefabrication and Building Equipment Price Branch, Office of Price Administration, Washington 25, D. C., a report stating the following:

(i) Plate number or other identification for each commodity whose price has been increased.

(ii) Its maximum price in effect just prior to the increase authorized by this order.

(iii) Its maximum price in accordance with this order.

This amendment shall become effective May 9, 1946.

A.S.H.V.E. . .

(Concluded from Page 1, Column 4)

On Wednesday night, June 12, the semi-annual banquet will be held at the Chateau Frontenac, Quebec. The meeting will close on Thursday, June 13, when the cruise ship is scheduled to dock at Montreal at 8:30 a.m.

The complete program follows:

SUNDAY, JUNE 9

Meeting of Committee on Research.

MONDAY, JUNE 10

9 a.m.—Registration (Mount Royal Hotel).

10 a.m.—Council meeting.

12:15 p.m.—Welcome luncheon (Mount Royal Hotel—Jacques Cartier Room).

2 p.m.—Research session (Mount Royal Hotel—Jacques Cartier Room).

President Alfred J. Offner presiding.

Greetings by President A. B. Madden, Montreal chapter.

Response by President Offner.

Committee reports.

"Forced Convection Heat Transfer Coefficients along a Smooth Flat Surface," by G. V. Parmelee and R. G. Huebscher.

"Effect of Turbulence Promoters on Film Coefficients for Water

Inside Tubes," by L. G. Seigel.

"Energy Losses at Exhaust Hood Entrances," by A. D. Brandt.

"Characteristics of Unit Dust Collectors," by A. C. Stern, Jack Baliff, A. E. Perina, Robert Crowley, Benjamin Feiner, and A. A. Urbano.

2:15 p.m.—Ladies sightseeing trip and shopping tour.

5:30 p.m.—All aboard S. S. Quebec for cruise on St. Lawrence river.

6:45 p.m.—Leave Montreal.

7 p.m.—First call for dinner.

8:30 p.m.—Entertainment and dancing in music room of steamer.

TUESDAY, JUNE 11

7:30 a.m.—S. S. Quebec leaves Quebec for Murray Bay.

9:30 a.m.—Air conditioning session (S. S. Quebec—Music Room).

"Air Conditioning of a Canadian Windowless Textile Mill," by G. Lorne Wiggs.

"The Sol-Air Thermometer—A New Instrument," by C. O. Mackey and L. T. Wright, Jr.

"Heat Flow Through Wet Building Walls," by E. C. Willey.

12:30 p.m.—Arrive Murray Bay for sightseeing, swimming, golf, tennis at Manoir Richelieu.

3:30 p.m.—All aboard for the Saguenay.

4 p.m.—Chapter delegates meeting.

7 p.m.—Sightseeing at Tadoussac.

9 p.m.—Entertainment and dancing.

WEDNESDAY, JUNE 12

1 a.m.—Leave Bagotville.

9:30 a.m.—Heating session (S. S. Quebec—Music Room).

"A Rational Basis for Solar Heating Analysis," by F. W. Hutchinson and W. P. Chapman.

"Hold Fire Controls for Bituminous Coal Stokers," by C. C. Wright.

"Influence of an Interior Coating of Aluminum Paper in Internal Thermal Conditions and Heat Economy," by R. J. Lorenzi, L. P. Herington, and C. E. A. Winslow.

2 p.m.—Deck sports and games.

2:30 p.m.—Nominating committee meeting.

7:30 p.m.—Banquet (Chateau Frontenac, Quebec).

10:30 p.m.—Leave Quebec.

THURSDAY, JUNE 13

8:30 a.m.—Arrive Montreal.

Bendix Drops Stock Move

SOUTH BEND, Ind.—Withdrawal of a registration statement filed March 20 with the Securities and Exchange Commission proposing issuance of stockholders of warrants subscribing to new common stock is announced by Judson S. Sayre, president of Bendix Home Appliances, Inc.

Mr. Sayre claimed "industrial conditions" had caused the withdrawal.

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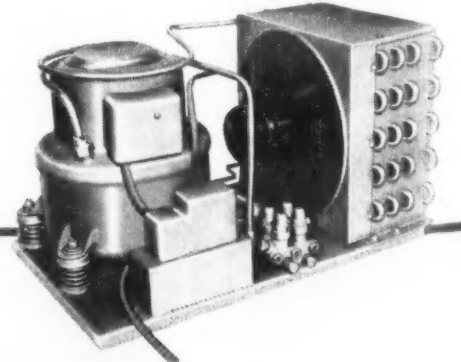
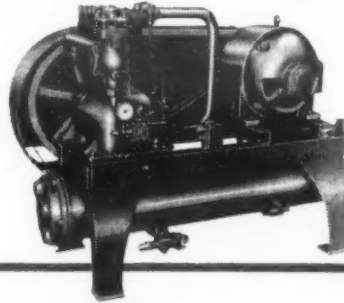
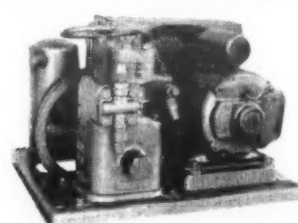
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Protect that reputation by specifying the best in refrigerating systems. Universal Cooler's complete line of refrigerating units, designed by refrigeration specialists and built by craftsmen who have "grown up" with the industry, can provide the dependable service that will help you maintain quality and protect your reputation. Modern production facilities and a quarter century of refrigeration experience assure the utmost economy of operation in your product when you select Universal Cooler. If you are a manufacturer, ask for the facts today . . . then you'll know why leading manufacturers of refrigerated equipment say: "Let's Buy Universal Cooler"



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